

Amateur Radio

Volume 83
Number 9
September 2015
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Behold, the Yagi Success at the 1000 steps



- ▶ FM range tester
- ▶ The Loop Skywire
- ▶ Winter Field Day Results



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E-mail: yaesu@jnb.com.au



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Editorial

Editor

Peter Freeman VK3PF
editor@wia.org.au

Technical Editor

Peter Gibson VK3AZL

Publications Committee

Peter Hartfield VK3PH
Evan Jarman VK3ANI
Ewen Templeton VK3OW
Kaye Wright VK3FKDW

All circulation matters

nationaloffice@wia.org.au

How to submit material

Secretary
AR Publications Committee
PO Box 2042
BAYSWATER VIC 3153
or armag@wia.org.au

Letters to Editor

Editor AR Magazine
PO Box 273
Churchill Vic 3842
or editor@wia.org.au

Hamads

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

Advertising

All enquiries to
Advertising Manager
AR Publications Committee
PO Box 2042
BAYSWATER VIC 3153
or admanager@wia.org.au

Registered Office

Unit 20 11-13 Havelock Road
BAYSWATER VIC 3153
Australia
Phone: 03 9729 0400
Fax: 03 9729 7325

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This month's cover

Behold the Yagi! In the second half of July, the Eastern & Mountain District Radio Club activated the V13ANZAC callsign as part of the ANZAC Centenary celebrations. As part of the activation, the Club set up an impressive portable operation at the top of the Kokoda Memorial Track (1000 steps) at Ferntree Gully in outer-east Melbourne. Photo by Andrew Scott VK3BQ.

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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

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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.

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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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The world's oldest
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Representing

The Australian Amateur Radio Service

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Registered Office of the WIA

Andersson House

Unit 20, 11 Havelock Road
Bayswater, Victoria, 3153

Tel: (03) 9729 0400 Fax (03) 9729 7325

email: nationaloffice@wia.org.au

<http://www.wia.org.au>

All mail to

PO Box 2042 BAYSWATER VIC 3153

Business hours: 10am – 4pm weekdays

National Office staff

Manager Mal Brooks VK3FDSL

Board of Directors

President Phil Wait VK2ASD

Vice-President Fred Swainston VK3DAC

Directors Robert Broomhead VK3DN

Rowan Dollar VK2ELF

Roger Harrison VK2ZRH

Ewan McLeod VK4ERM

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Editor 'AR' Peter Freeman VK3PF

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Standards Gilbert Hughes VK1GH

David Wardlaw VK3ADW

John Bishop VK2ZOI

John Martin VK3KM

NTAC Peter Wolfenden VK3RV

Historian Chris Platt VK5CP

IARU Region 3 Liaison Peter Young VK3MV

Monitoring Service

ITU Conference & Study Group

David Wardlaw VK3ADW

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Dale Hughes VK1DSH

QSL Curator National Office

Repeater Peter Mill VK3ZPP

Webpage Robert Broomhead VK3DN

Emergency Communications Group

Coordinator Phil Wait VK2ASD

Members Ewan McLeod VK4ERM

Peter Young VK3MV



Editorial

Peter Freeman VK3PF

Cooperation

A little cooperation between individuals or different groups can lead to very beneficial outcomes.

Just over a year ago, my local club found a new home-base after around three years of searching. A chance conversation between a committee member and a representative of another group resulted in an offer that warranted exploration by the committee. The outcome was the development of an agreement between the club and a new landlord to gain access to a building that was currently unused and somewhat run down. We came to agreement over terms and signed a five year lease agreement.

So perhaps this is not very interesting.... A key part of the agreement is that the radio club has committed to mowing the grass at the property, saving our host a significant sum of money over a year. The club purchased a ride-on mower (it is a large block!) and one particular member regularly mows the grass. We occasionally hold working bees, doing work around the grounds to assist the host organisation which also relies on a small core of volunteers themselves. Yes, it is extra work for a relatively small core that regularly participates. In return, we have been given a lot of latitude in tidying up and modifying the building. We have built in a radio room and are building workbenches in one corner of the building. We still need to build a small kitchenette area and have committed to building a new section of boundary fence, so we still have lots of work ahead.

As a result of goodwill on both sides, both groups are happy and cooperation continues. Hopefully all of our work will result in a long term relationship and an almost permanent home for our club.

In a different example of cooperation, I recently made the trip to Cranbourne to assist the Gippsland Gate Radio & Electronics Club (GGREC) with an assessment event. The host Club had two assessors in attendance, with me and another Latrobe Valley assessor making up a team of four. Whilst it was a long day, with almost three hours of driving involved plus the time to run all the assessments, it was a rewarding day. The assessors had some time to chat in breaks, plus we also chatted with the candidates, especially after all the stress-inducing assessments were concluded and all the paperwork was completed. The day was a success for all, with three new Foundation, one Standard and two Advanced licensees to hopefully be on-air in the very near future. All candidates started from scratch – there were no upgrades. So well done to all involved! I anticipate that at least one of the GGREC assessors will return the favour when our local club runs an assessment event later in the year. A little cooperation usually makes life easier for everyone.

Until next month,

Cheers,

Peter VK3PF



Coming soon

JOTA/JOTI 2015 | October 16-18



WIA comment

Phil Wait VK2ASD

Even the WIA needs change

By the time you read this, the seven WIA Directors will have met at Melbourne airport. The WIA Board meets monthly by teleconference and, due to the considerable cost of flying Directors around the country, even if it's only for one day, in recent years we have only met as a group once per year at the AGM. However, this time we needed to discuss some important changes at the WIA, and we really had to meet in person.

It's now 11 years since the formation of the National WIA, heralding in a period of improved operational effectiveness and stability, especially in the WIA's core roles of advocacy and representation, both locally and internationally, and the training and assessment of new radio amateurs.

However, many things have changed over those years, such as increasing competition for people's time, the ageing of the amateur population, the pervasiveness of the internet, mobile devices and social media, greater regulatory complexity, increasing requirements for preparing submissions with very short response times, an increasingly complex technological environment, and immense pressure on the spectrum (especially between 400 MHz and 10 GHz), to name a few.

The work of the WIA has become more complex and demanding, and some of our volunteers are finding themselves doing way too much and more often than they planned or expected. Although there have been significant advances over the years in how the WIA functions, improvements

have been incremental and member expectations are now challenging resources.

The traditional ivory tower style "command and control" corporate leadership is a thing of the past, and these days the most successful organisations have an open structure that is more social and engages people differently. The national WIA was formed along the lines of an 'operations' business model, which served us well during the establishment years. Now, it has become apparent that the WIA has to adopt a pro-active customer service business model to address current and future business issues facing the Australian amateur radio community.

The WIA Board met in person to discuss how the organisation can become more responsive to the changing needs and expectations of its members in the face of changing social conditions. Naturally, as I write this Comment, I don't know what the outcome will be; however, I can tell you about three new initiatives that the WIA Board has already put in place.

The WIA website now contains over 2500 pages of information, and attracts over one million page visits per year. Vital information to radio amateurs, such as training and assessment resources, amateur licence regulations, band plans, affiliated club details, contest and award details, etc., all need to be kept up to date and readily accessible. Unfortunately, due to the sheer volume of that information, sometimes pages have not been updated or are difficult to find.

We do not believe there are

major structural problems with the WIA website, or that we need to "throw the baby out with the bathwater" and start again, and do a total redesign, but we have identified that information retrieval and site navigation can be improved, and it could become rather more mobile-device friendly. The WIA has embarked on a re-tune of the WIA website and, who knows, with that many visits per year it could provide a modest income stream in due course.

Over the past few years, the WIA membership has declined slightly. In actual fact, there is about 7% membership churn per year, with the number of new members almost replacing the number who cease to remain members. Naturally, age is a major contributor, with an increasing number of silent keys each year, but we don't really have an accurate idea why other members simply don't renew. Some may dislike us for some reason, some may simply forget to renew, others may believe that they can no longer afford it; we don't actually know.

By the time you read this Comment, the WIA will have commenced a pilot project phoning lapsed members, in order to either sign them up again, or at least determine the real reason for their non-renewal. This process will be done with sensitivity and tact by an external contractor, and the information gained will be very useful for better targeting member services in the future, and we just may reverse the membership trend.

Continued on page 5

WIA Contest Champion Results 2014

The WIA Contest Champion VK4PJ Peter Brown trophy in recent years has generally been a battle between two to three operators for first place. This year however, with the Oceania DX contest results pending, any one of nine operators could have taken it out.

The Oceania DX contest results were slightly delayed this year, but now with the results released the WIA is proud to announce the winner of the Contest Champion for 2014.

VK4SN Alan Shannon with 436 points is the 2014 winner. 2nd place goes to VK1DA Andrew Davis with 360 points, and rounding out the top 3 is VK6IR Stephen Chamberlain with 320 points.

Alan participated in all but 1 of the eligible contests this year and scored very highly in all of those. Congratulations Alan!

The full list of results can be viewed at the Contest Champion page <http://www.wia.org.au/members/contests/contestchampion>

73, and good luck to everyone in 2015.

When may a person use an Amateur Radio station?

This is a question often raised, steeped in some misunderstanding, and causes a few arguments along the way. The Radiocommunications Licence Conditions (Amateur Licence) Determination 2015, or LCD, makes the regulations clear. Not fully reading and understanding their intent and history can be problematical.

All Foundation, Standard or Advanced stations, may be used by an unqualified person, for the purpose of self-training in radio communications, provided a licence holder is in charge, in other

words, are present and effectively operate. The LCD defines 'operate' as meaning, "take an action to control the operation of the station or of a transmitter that is part of the station." This is particularly useful when a station is used at numerous events, like the Jamboree On The Air, or for example, where a member of the public wants to talk on a microphone. However, the LCD makes only Advanced or Standard licence holders allowed to have a person use the station for the purpose of training or being examined for a qualification - such as the time of a practical assessment.

Another misunderstanding that can arise is about the operation of an Advanced station, by those who may hold a lower level amateur qualification. The ACMA only issues an Advanced licence to clubs. It asks that a nominated licensee at that level be responsible to ensure that the station is used within its licence conditions, and when it is used unsupervised, that the person does so within their own licence parameters of frequency, power and modes. If the club station is operated alone by a Standard or Foundation licence holder, they must abide by their own licence conditions for which they are personally qualified. This also means that a club callsign may be used portable, such as during a net, provided the conditions applying to the licensee present are met. However, should an Advanced licensee be present and in charge, it may at any time be also used as an Advanced station under its licence conditions.

The WIA hopes this clears up any confusion. It reminds everyone that the LCD provisions apply to all, and is a condition of licences issued by the ACMA.

Update to Permitted Equipment for amateur use

Sometimes a radio amateur is unsure of the type of transmitting equipment they can possess. This doubt may arise as the result of ACMA compliance activities involving station inspections, for example.

The WIA has successfully argued to the ACMA that compliance issues are, in almost all cases, one of behaviour (illegal acts), rather than defining compliance with what type or classes of equipment a radio amateur may possess or operate.

Every amateur licensee needs to read and understand the Amateur Licence Condition Determination. This sets out, in detail, the conditions under which licensed amateurs can operate their stations. The term 'operate', for the purposes of the LCD, means to cause a transmitter to transmit or cease to transmit.

In Australia, the ACMA has powers to make Standards (technical specifications) for radiocommunications equipment under the Radiocommunications Act 1992. However, the primary tenets of the Amateur Radio service are technical investigation, experimentation and self-training; hence, Australian Standards for radiocommunications equipment are not applicable to amateur stations.

There are no specific standards for equipment that is manufactured specifically for the world-wide amateur market. Note, however, there are some general technical conditions that apply to every amateur licence, and these are found in the LCD.

Put simply:

- an amateur transmitter, while required to meet certain technical standards in the LCD, does not have to comply with an

Australian Standard, or be 'type approved';

- an amateur (other than a Foundation licensee) may build a transmitter;
- an amateur (other than a Foundation licensee) may modify a transmitter built for other services, so that it can work on an amateur band or bands; and
- all amateur licensees must operate any transmitter in accordance with the LCD, or any other condition printed on the licence issued to them.

Therefore, no matter what amateur licence (Foundation, Standard or Advanced) you hold, you may possess any piece of equipment manufactured specifically for the global amateur market, provided that you operate it in accordance with the type of licence you hold, even if the item of equipment is capable of operating in certain spectrum segments that are not available to amateurs in Australia.

A Foundation licensee may build or modify transmitting equipment to operate on the amateur bands for their own self-training, but cannot operate it. Such equipment can only be operated by an amateur holding a licence appropriate to the equipment's capabilities.

Foundation Licence, permitted equipment

Essentially, the Foundation Licence is an operator licence that requires a minimum of technical knowledge that will allow safe operation of amateur radio equipment.

A Foundation licensee can only operate (that is, transmit with) commercially manufactured amateur equipment, is restricted to defined frequency bands and emission modes set out in the LCD, and is limited to 10 watts transmitter output power.

Allowed Equipment for Standard and Advanced licensees

As the radio amateur has a licence, during an ACMA station inspection the presumption is that the possession of radiocommunications equipment is for the purpose of operation (that is, transmitting). But if the item of equipment can be operated in accordance with the licence type, or modified to operate in accordance with the appropriate licence conditions, the possession cannot be unlawful, in the absence of other evidence.

An Advanced or Standard licensee may modify a transmitter manufactured for another service that is subject to a 'Standard' (technical specification), but in doing so, the equipment becomes what

is known as 'Non-Standard' and therefore cannot legally be used outside amateur radio spectrum. Modification means removing or altering components, including the microphone, as well as changing firmware or software features that existed when the device complied with the Standard for another service.

Prohibited Equipment

Should equipment manufactured for the amateur market be modified to operate outside amateur spectrum, it cannot lawfully be operated on the Citizens Band, Maritime Band, Land Mobile or other bands, as equipment used by these services is required to comply with specific Australian equipment standards.

Summary

It is expected that all radio amateurs will act in a responsible manner (behaviour), and comply with their individual licence conditions as set out in the LCD.

See also Station Inspections, at <http://www.wia.org.au/licenses/licensing/stationinspections/>

If you have a question on the use of radio equipment on the amateur bands, please send an email to the nationaloffice@wia.org.au setting out your question or concerns.



WIA comment

Continued from page 3

Those of you who have read my President's Comments over the past few months will know that I am keen to improve the social relevance of amateur radio, particularly in the fields of education and technical experimentation. The WIA has just announced the second round of Special Purpose Grants for commencement in 2016. Unlike the previous Club Grants Scheme, WIA Special Purpose Grants are

available to any club, individual or group and their selection will be aligned with the WIA's development strategy of the time, with a focus on the benefit to the wider amateur community. In some circumstances, especially where there is developmental risk, the grant may be staged.

So, change is in the air at the WIA. Change is always difficult for any organisation, and I fully

expect there will be difficulties and unexpected expenses, but every organisation needs to regularly take stock of itself and move forward – even the WIA. I hope to have more to say after our Directors meeting in Melbourne.

PS. Watch out for the WIA Special Purpose Grants information on the WIA website.



Keep up to date with all of the major Australian contests, including rules and results. Visit the WIA Contest Website at: www.wia.org.au/members/contests/about

FM simplex transmitter range tester

Peter Parker VK3YE

Those experimenting with VHF/UHF repeaters, remote station operation or handheld antennas often wish to test their equipment's range. There's several ways to do it. These include using a digital audio recorder or a computer with freely available VOX audio recording software. While these allow you to hear your audio quality you don't get instant results – ie you only know transmitting performance after you've returned home. That means much futile walking or driving if range turns out less than expected.

Here's another way. Unlike recording methods it's real time. You know instantly whether your portable signal is audible at home or not. That makes it faster to identify fringe areas and do checks from more directions.

If you didn't know any better you'd think you were kerchunking a repeater, because that's what it sounds like. The difference is you're on a simplex frequency, triggering your own home or mobile transceiver.

Four parts, collectively costing under a dollar, can make your FM mobile rig into a range tester. Internal modifications are not required.

The connections to the transceiver comprise

- (i) receive audio,
- (ii) transmitter push to talk (PTT), and
- (iii) a ground connection. Check your rig's manual or online to see if all these connections are available at the microphone and external speaker sockets.

Some radios are compatible with speaker microphones and have speaker connections in their microphone socket. This is handy as no separate speaker socket connection is required. Also verify

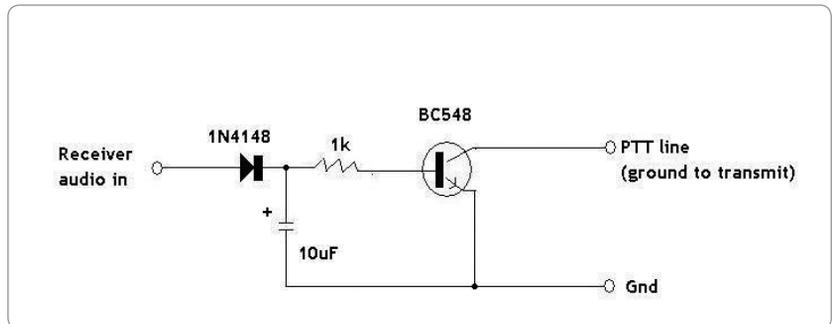


Figure 1: Schematic diagram.

that the rig switches to transmit when the PTT line is grounded. If not you'll need to devise another switching arrangement; possibly with another transistor, optocoupler or reed relay.

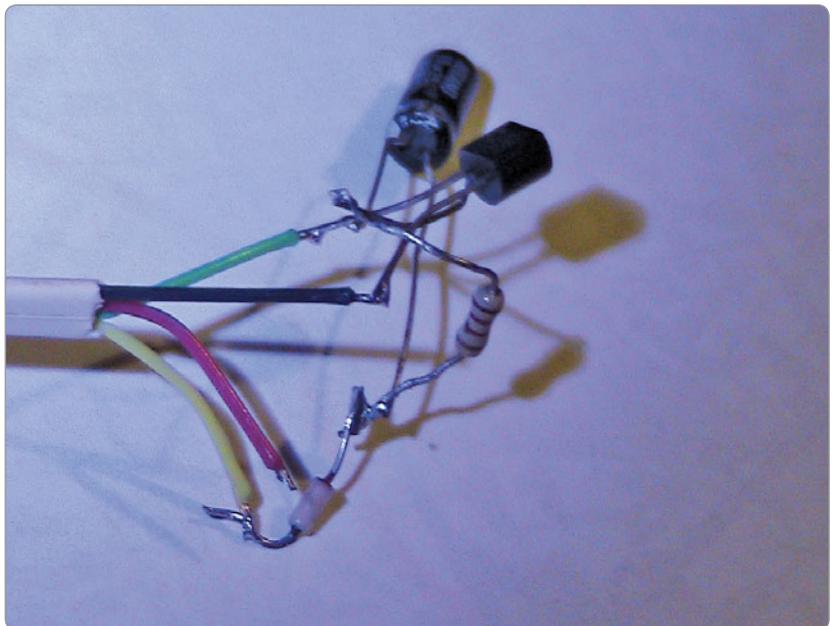
How it works

Range testing requires two transceivers – the handheld or mobile unit being tested and a base rig to which this tester is fitted. The latter does not need to be at home; it could just as easily be on a hill

or in a car if testing range from a remote site.

See the circuit in Figure 1. Audio from the base unit's receiver is tapped off and fed to the tester. The 1N4148 rectifies this to DC before being fed to the BC548's base via a resistor. Even a brief carrier strong enough to trigger the mute will switch on the transistor. The resultant current flow in the collector switches the set into transmit.

Photo 1: The range tester requires just four parts.



Because it's in transmit mode there is no sound coming from the base unit's receiver. Without an audio input the transistor switches off and the base unit returns to receive.

The 10 μF capacitor has two purposes. Firstly it smooths the rectified DC voltage derived from the receiver's audio output. Secondly, in conjunction with the 1k resistor, it provides a time delay. This causes the carrier to be on for about one or two seconds, allowing you to adequately hear its strength on your portable or mobile receiver. The effect sounds just like the 'tail' you hear when 'kerchunking' a repeater.

Construction

With so few parts it's hardly worth making a circuit board. I soldered my unit to the end of some four conductor telephone cable. Those adept with surface mount parts may be able to build their tester into a microphone plug housing.

If you don't have a microphone plug hunt around in your junkbox for a socket that can be pulled apart and mate with your transceiver's microphone socket pins. Heatshrink tubing or even insulation from thick wire can be used to avoid short circuits.

Testing and uses

Wire the range tester to the transceiver, paying special attention to correct connections to the microphone and speaker sockets (if used). Set the muted receiver to

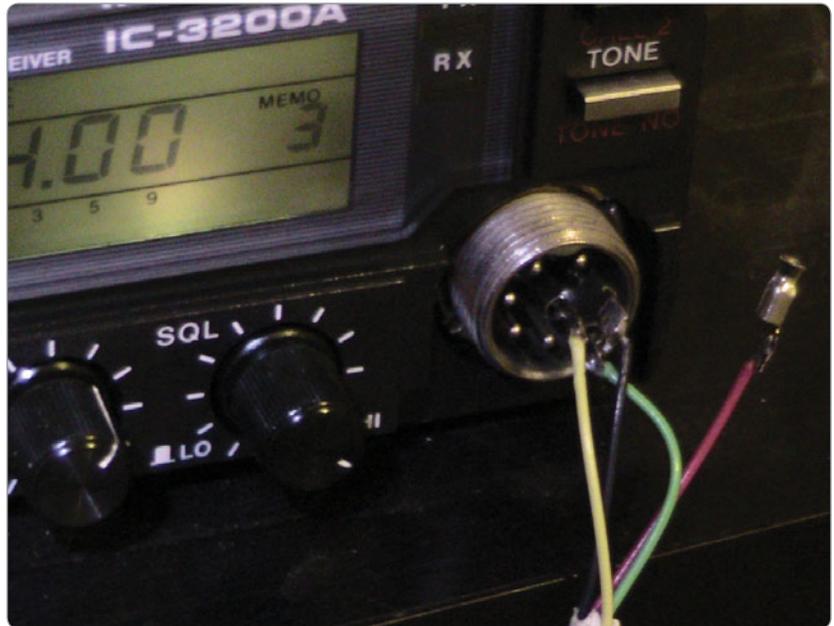


Photo 2: The base transceiver's microphone socket showing salvaged connectors from old crystal sockets.

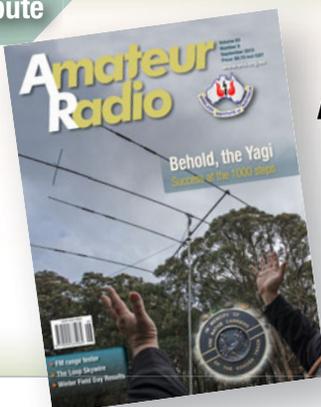
an obscure simplex frequency and adjust the volume to half position or more. A brief carrier from another transceiver should put the tester into transmit mode for one or two seconds. If not check voltages with a voltmeter or oscilloscope, noting that rectified audio from the receiver needs to be sufficient to switch on the transistor.

If it still doesn't trigger try other component values. In one case 10k resistor was more reliable than the 1k resistor specified. Another builder wanted a longer tail and substituted a 100 μF capacitor. Enabling CTCSS in your receiver might reduce false triggers from noise and other users of the frequency.

This is a 'quick and dirty' educational project intended to demonstrate a concept. With a few more parts, many more applications become possible. These include remote control and parrot repeaters in conjunction with a digital voice recorder. If you made the transmit time longer and applied some rainfall or temperature sensors you could make it a low-drain beacon-on-demand transmitting weather station. An Arduino board could provide Morse identification, timing and control functions. The possibilities are limited only by your imagination.



Contribute



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

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

What's in the new 2 m & 70 cm band plans?

Grant Willis VK5GR

Introduction

12 months ago I started a discussion through a series of articles in *Amateur Radio* magazine about the 2 m and 70 cm band plans and whether they still supported today's Australian Amateur Radio service. Since those articles, I have had many discussions with amateurs online via the VK Logger forum as well as the WIA and AR Facebook pages plus personal contacts and written feedback received direct and via the WIA National office. I also have had numerous discussions with members of the WIA Technical Advisory Committee. It has been great to see the engagement I have on this issue. At the outset I would like to thank everyone who did make contact and make their feelings and ideas known. It has been invaluable in helping prepare the final plan.

Out of those articles and discussions, the WIA announced that they would formally review the 2 m and 70 cm band plans. This ultimately led to me attending a meeting of several board and TAC committee members at the WIA AGM weekend activities in Canberra. During that meeting, a formal consultation process into the 2 m and 70 cm band plans was decided and the broad technical guidelines for a new plan were laid down.

Subsequently, working closely with Peter Mill VK3APO and John Martin VK3KM from WIA TAC, a final draft proposal was developed and was released to the WIA membership and wider amateur radio community on 20th May 2015. After the initial flurry of feedback from members, a further amended version was released on 13th June which addressed the major initial concerns people had expressed.

Comments were closed on July 15th and the board has subsequently met to ratify the plans for publication in the 2015 *Callbook*. The following is a summary of the major changes to the existing plans.

Highlights of the new plans

Throughout the production of the new band plans, the intention has been to simplify the sub-band allocations whilst meeting the technical challenges presented to us in today's modern spectrum and technology environment.

This simplification process has included:

- Grouping special interests into general categories – for example D-STAR, P25 etc. are now grouped under the Digital modes category.
- Maintaining allocations in contiguous blocks used for one purpose rather than interleaving incompatible activities such as repeaters and simplex together.
- Seeking where appropriate to remove the designation of channels solely for analogue or solely for digital voice use, and instead allowing either to be used (thus supporting multi-mode repeaters for example).

On the technology and spectrum front, the following challenges were addressed:

- Repeater channel scarcity in VK2/3/4 in the 146-148 MHz band segment.
- The impact of ACMA's LM8 VHF commercial channel allocation guidelines on co-sited 2 m amateur repeaters.
- LIPD interference on 70 cm repeaters.
- The loss of 420-430 MHz from the Amateur Service in Australia.
- The decline of AX.25 activity and the recovery/reuse of that spectrum for future uses.

- The impact of interleaving 12.5 kHz and 25 kHz channels together and the consequences not only for repeater receivers but also the mobile and home stations using them.
- The addition of the new IARU endorsed 2 m satellite sub-band on 144.000-144.025.

The end result was that the majority of these challenges were able to be solved, enabling Amateurs to continue to use their spectrum efficiently into the next decade.

2 m Band Plan Revisions

Repeaters – Channel Capacity

The apparent lack of available spectrum for new repeaters and new digital repeaters in particular on 2 m was one area that we wanted to tackle. Step one was to assess just how big or small that problem really was. A study was conducted to assess spectrum channel availability. It took into account:

- existing repeater locations,
- channel reuse distances,
- signal bandwidth and adjacent channel overlap concerns,
- existing band plan channel capacity.

To calculate the effective workable reuse distance between co-channel 2 m repeaters, a radio 'link budget' was prepared to assess what path losses represented a typical repeaters edge of coverage. This was then translated into an estimated average range using various propagation models and some broad assumptions. (Remember this was about capacity estimation, not planning an individual site's possible frequency options).

The conclusions were that 2 m repeater channels typically shouldn't be reused where sites are

spaced closer than 200 km apart and the repeater is less than 300 m higher than the "average terrain" a mobile is located in. Home station access was not considered, for if it was, the repeater spacing requirements blew out to 300+ km.

Higher sited repeaters (>300 m elevation) were also evaluated. While they ultimately didn't contribute to the macro estimate of 200 km inter-site distance, it is clear that once we got down to the individual site allocation process, we would end up in a situation where the number of free channels was optimistic, making our estimate of impacted repeaters where channel capacity was a problem conservative. As I didn't want to overstate the amount of future possible repeater spectrum required, this was considered appropriate.

The idea was that unless, say, more than 5-10% of repeaters were impacted by channel capacity problems there most likely wasn't enough of a broad based issue to justify additional new channel allocations. Based on this, we could then take a look at each existing repeater license and count how many repeaters are within 200 km range of it. This then leads to an assessment of channel capacity.

The conservative result: nearly 21% of existing repeater sites (55 sites) had less than five free analogue or digital channels remaining on 2 m. Further, sites with less than five free channels often had up to 10 other accessible repeaters within a 40 km radius area. This was going to make digital migration by service duplication difficult at best (multi-mode analogue/digital would be the only way to go in those areas – but was restrictive).

Therefore, to address the identified channel capacity constraint, a new repeater sub-band has been opened on 144.925-145.050 MHz + 600 kHz (145.525-145.650 MHz inputs) targeted exclusively for narrow band (10.1 kHz maximum bandwidth) modulation modes with 12.5 kHz spacing channels. The idea is that this sub-band will only be allocated as a last resort, or where finding any other channel for sites wishing to parallel operate a voice and digital repeater together wasn't technically feasible.

Repeaters –TMR Interference

Until now, the only state that appears to have significantly adopted VHF Trunked Mobile Radio (TMR) networking was Victoria for their government radio network. Most other state governments and commercial operators had opted to build TMR networks on the 400-500 MHz band. This could be about to change, with increasing interest returning to VHF-Hi Band for TMR type systems in the wake of the Victorian GRN success.

You may now be asking "but what does this have to do with amateur repeaters?" Well, the frequency channel plans issued by ACMA for these services provide for a transmit channel spacing of 600 kHz. Therein is the problem for the amateur repeater service on 2 m.

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At 600 kHz apart the VHF TMR transmitters are, through no direct fault of their own, likely to mix with the amateur repeater transmitter in a way that produces a spurious signal 600 kHz away from the amateur repeater transmitter. The problem with this, obviously, is that this falls directly on the amateur repeater receiver! This mixing, known as Passive Inter-Modulation distortion, will successfully deafen an amateur repeater and cause it to relay unwanted transmissions. It can be generated through rusty bolts on a tower, or electrically noisy antenna joints as well as poor quality cabling. As such it can be extremely difficult to directly solve at a site. Ultimately it is simply best avoided.

For new amateur repeaters in the future being co-sited with TMR systems, the only effective solution will be to have an alternate receive offset available. This was first solved in the 2012 2 m plan when a '-1.6 MHz' offset was introduced for selected repeater channels between 146.625 and 146.975 MHz. This had the negative impact of placing repeater inputs between 145.0 and 145.4 MHz, mixing them up with existing simplex allocations such as APRS, ARDF, and WICEN etc.

In this 2015 plan, as part of the goal of improving the band plan's simplicity, the block of channels that could use -1.6 MHz offset as an alternative to 600 kHz was changed. Now, repeaters allocated between 147.025 and 147.375 MHz can use either their existing +600 kHz offset, or alternatively can use a -1.6 MHz offset if they are faced with TMR intermodulation interference issues (or unresolvable pager interference as well). This has moved the repeater receivers to 145.4-145.8, clearing the majority of the simplex channel allocations, while providing additional spectrum efficiency through overlapping and reusing the new 144.925-145.050 repeater channel input frequencies as well. It should be noted that the allocation of -1.6 MHz offsets will be

the exception rather than the norm and will only be undertaken at sites where TMR or Pager interference cannot be resolved.

All up, through a reallocation of 125 kHz of the old AX.25 band segment to digital repeaters, and the shift of the -1.6 MHz repeater offset optioned channels above 147 MHz, we have been able to clear 350 kHz of simplex channel space of interleaved repeater inputs, solve the 2 m repeater channel capacity issue and provide a solution for the TMR inter-modulation interference issue in this version of the plan. This will (hopefully) set up the amateur repeater service on 2 m for the next 40 years (considering that the last major change for repeaters on 2 m was back in the 1970s at the now famous Albury conference)!

Satellites

On the 2 m band, there has always been the primary satellite sub-band of 145.8-146.0 MHz. In addition there have been various spot frequencies assigned for various special uses over the years. The 145.55 and 144.95 Space Shuttle channels were an example of this. However, now that the shuttle program is over, it was time they were retired from the band plan.

The other change is to formally incorporate the new 144.000-144.025 satellite segment agreed to by the IARU.

Digital Voice Simplex Segments

Another very active and growing area of the hobby has been the use of digital voice modes. Until now they only had a set of spot frequencies allocated to them. As the plan was seeking to promote opportunity for the amateur service to move more towards digital modes, it was appropriate that those modes be better accommodated in the band plan.

During the review of how the 2 m band was being used, it became clear that the amount of AX.25 packet radio activity in most places

had declined significantly. This was seen as a good opportunity to establish other digital modes into those segments. Therefore, it was decided to make most of the AX.25 segments available to all digital modes (voice+data), not just AX.25.

To that end, the 144.750-144.900 band segment has now been listed as dual AX.25 / Digital voice to support the ongoing digitisation of amateur communications into the coming decade.

70 cm Band Plan Revisions Repeaters – LIPD interference

The biggest challenge on 70 cm was how to deal with the Low Interference Potential Device (LIPD) repeater interference issue. LIPD interference has continued to increase particularly in metropolitan areas over the years. Studies show that the existence of LIPDs may have reduced the effective coverage of some repeaters by as much as 25% due to the increased radio noise floor. As a result of this menace, the amateur service has been facing artificial channel scarcity problems on 70 cm as repeater owners sought to move their systems onto the very narrow LIPD free channel segment of 439.8-440.0 MHz.

With the demise of 420-430 MHz and the removal of the 426.25 ATV channels that spanned 425-432 MHz, an opportunity was presented to relook at how 430-432 MHz could best be used.

The final proposal was a compromise between how repeater link systems use the band around 430 MHz (that had only just migrated from 420-422 MHz) and what simplex activity was already doing in 438-440 MHz. Despite the compromise, an effective solution has been found.

The 70cm repeater band will now consist of two primary repeater sub-bands. These are:

- 438.000-438.925 MHz outputs
-7 MHz offset => 431.000-431.925 MHz inputs

- 439.800-440.000 MHz outputs
-5 MHz offset => 434.800-435.000 MHz inputs

With those two sub-bands we can eliminate completely the impact of LIPDs on the 70 cm repeater system. This channel allocation gives us 90 x 10.1 kHz bandwidth channels or 45 x 16 kHz bandwidth channels, which is enough to cater for current activity and still have additional capacity left for growth even in the busy regions of SE QLD, the greater Sydney basin and central coast plus greater Melbourne and central Victoria.

The biggest change for the amateur community to accept with this plan is the move to a -7 MHz offset. It won't suit everyone and there will be a minority of people who may not be able to make their old equipment work with a new offset. While unfortunate, it can't be avoided within the bounds of our current spectrum allocations

and other incumbent uses such as the Amateur Satellite service. In reality, most modern 70 cm radios can have their offset programmed or at the least most likely have a split memory channel which can be programmed to use a 7 MHz offset.

Another positive point of this plan is that, for a large number of existing 438.0-438.775 repeaters, the migration (should they choose to do so) is much simpler as you only need to shift your repeater's receive frequency. It should also be possible to entertain dual receiver repeaters thus providing a transition period where you maintain both offsets on the one repeater.

The other impact will be that no more new repeaters will be licensed in 439.275-439.775. For existing repeaters in that segment who wish to move to new channels, both the transmitter and receiver will need to be moved. Unfortunate, however unavoidable considering the way

the band is allocated around 432 MHz.

Digital and Analogue Voice Simplex Segments

On 70 cm, the FM simplex segments have always been comparatively small as opposed to the repeater allocations. The old plan only allocated 450 kHz for simplex, and was slowly seeing fewer and fewer channels being left for general use.

With the repeater channel reallocation below 439 MHz, the new 70 cm simplex segment has been expanded to 438.95-439.775 MHz, making it now 775 kHz wide. This has been done in concert with the decision to remove the demarcation between analogue voice and digital voice within the simplex segment.

It is expected that digital and analogue can share fairly equitably and, as more people migrate



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towards digital systems, maintaining only a limited number of prescribed channels will maximize the space for new experiments to be carried out and new modes to take hold as they gain amateur's interest, without having to continually modify band plans.

The only specific changes then on 70 cm have been the need to reassign some long held simplex channels that were reallocated to the repeater network. The main example of this is the WICEN channel on 438.8 and the more recent P25 call channel on 438.95. New homes for these channels have been allocated as:

- WICEN – 438.950
- Digital Voice Calling – 439.200
- ARDF – 439.400

70 cm Experimental Segment

One of the interesting consequences of the new plan is that a 1 MHz wide experimental segment will be opened between 433-434 MHz. This segment is wide enough to permit some of the new DVB-T reduced sub-carrier 1 MHz wide Fast Scan ATV transmissions to be conducted, as well as provide an interesting opportunity for other new and innovative types of amateur communications systems, perhaps mesh digital data networks, for example, using commercially available LIPD mesh technology.

It was an important goal to clear some space for these random undetermined experiments and it is hoped that the amateur community will embrace and make good use of this new opportunity.

General Band Plan Revisions

Digital Voice Modes

The other main change has been the removal of digital mode specific designations. The band plans will no longer differentiate between APCO P25, D-STAR, FUSION or whatever else may come along. Any and all

digital voice mode will fall into the "digital" category, thus allowing the market and interest to dictate which particular digital format ends up being adopted, without constraining that adoption by the band plans.

Digital vs Analogue Repeater Channels

There will no longer be any distinction between analogue and digital repeater allocations. All channels can be used for either purpose, such that the band plan doesn't need to be revisited in the future while the expected analogue to digital migration takes place.

Special Interest Channels

Some disused special interest channels have also been dropped while others have been made more generic. 146.6 on 2 m for example is no longer designated for RTTY while the IRLP and EchoLink simplex channels are now grouped under the broad category of "internet gateways". Some special function digital mode specific channels (i.e. D-STAR) have been dropped with the expectation that operators using those modes will migrate onto channels of their choice within the digital simplex segments. Again this is in keeping with the "let the market decide" philosophy that has been adopted within the band plan designs.

Legacy Allocations – The Plan

Finally, as with any band plan change, the big question on everyone's mind no doubt is what will happen to all of the existing systems that are already licensed and on air. The WIA board discussed this with TAC and the clear answer was the following:

All existing fixed amateur service licenses will be able to remain on their current frequency allocations for as long as they wish. There will be no forced reallocation.

New systems will be licensed on the new band plan as soon as the plan takes effect.

Where future new systems have no choice but to be licensed on a frequency that would otherwise be free but for the existence of a legacy system, it will be left to both the existing and new user to come to a mutually acceptable arrangement.

No other way is considered appropriate or fair. It was with this principle in mind that the entire plan has been designed. So if you currently hold an existing license and don't want to change to conform then you are under no obligation to do so! Any change will be at your discretion.

Conclusion

Over the past 18 months it has been an interesting and challenging exercise to try and engage with as broad a community of amateurs and as broad a number of special interest groups as possible. Amateurs it seems are lousy communicators and it has taken a lot of effort to elicit even the feedback we did receive. Hopefully for those who we didn't manage to reach, they will find that their interests are still duly represented. For those who did make contact with us, we thank you very much for taking the time to do so.

Band plans are gentlemen's agreements and are not law. However without them, significant disruptions can occur to people's enjoyment of the hobby. Hopefully by updating and modernizing the 2 m and 70 cm band plan we can continue to promote harmonious sharing of this very limited spectrum resource within the amateur service.

Thanks also for the engagement and support of the WIA board and the Technical Advisory Committee on this issue.



Are you up to date?

Download the new 2015 LCD now! [See page 14.](#)

Band Plan Notes

John Martin VK3KM

40 metres

IARU has adopted a new plan for the 40 metre band, which is recommended for all three regions. The CW segment has been expanded, and is now 7000 - 7040 kHz. Digital modes now have a 20 kHz segment at 7040 - 7060 kHz.

30 metres

IARU have adopted a revised plan on 30 metres, with the recommended digital modes band expanded to 20 kHz at 10.130 - 10.150 MHz.

HF Digital Voice

There are very few calling frequencies on the HF bands, because we can be certain that any frequency we may wish to pick will be occupied by regular activity at one time or another. However it is worth noting that the following frequencies are used regularly for digital voice modes in Regions I and II: 3.630, 7.070, 14.130, 18.150, 21.180, and 28.330 MHz.

2 metres

IARU has adopted a new amateur satellite allocation at 144.000 - 144.025 MHz, and this has been included in the Australian band plan.

3.4 GHz

With ACMA applying restrictions in the band 3400 - 3575 MHz around most population centres in Australia, it is necessary to relocate the weak signal segment below 3400 MHz. The recommended frequency - at least for now - is 3398 MHz.



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Amateur Licence Conditions re-make – 2015

Roger Harrison VK2ZRH

The Amateur Licence Conditions Determination (LCD) was re-made at the end of June 2015 and quietly published on the Australian Government ComLaw website in the second week of July. One had to be watching regularly to know that it had happened. The Australian Communications and Media Authority (ACMA) made no announcement about it.

The previous LCD (“No.1 of 1997”) ceased on 7 July 2015, as reported on the ComLaw website.

This “new” LCD replaces the previous one, which was to “sunset” (expire) on 1st October this year. The re-made LCD enables amateur radio in Australia to continue uninterrupted.

The ACMA’s intention was to ‘tidy up’ the expiring LCD, so no significant changes have been made. In the tidying-up process, we have gained a few small concessions, lost a few things we already knew were going, and had a number of issues clarified.

In response to the ACMA’s consultation process, over March and April 2015, leading up to re-making the LCD, two submissions were made – one from the WIA and the other a private submission from Dale Hughes VK1DSH.

In the four pages of terms defined under Interpretation in the re-made LCD, there are quite a few changes, most relating to drafting style. However, of particular interest is the revised interpretation for the term “call sign” (make sure you always used complete call signs on-air!) and the deletion of the term “qualified operator”, which was in the previous LCD. It appears that the re-made LCD relies on the Radiocommunications (Qualified Operators) Determination 2005 for the interpretation of qualified operator.

The general intent of the licence

conditions remains unchanged, apart from those few things that we already knew about.

The good news

The good news is that the previous restrictions on 50 to 52 MHz for eastern states operators (to avoid Ch.0 TV interference) have been lifted, albeit amateurs remain a secondary service in these 2 MHz.

The 2300-2302 MHz band is retained. There has been no recent announcement from the ACMA about its 2013 proposal to withdraw the 2300-2302 MHz amateur allocation so that 2300-2400 MHz could be re-allocated for Spectrum Licensing.

However, the WIA considers that 2300-2302 MHz is still “under threat” and we’ll have to await the outcome, firstly, of any allocation decisions from WRC-15 that may affect the 2300-2400 MHz band and, secondly, the government’s Spectrum Review currently under way. If the band is affected, it will take the authorities some time to update the Australian Radio Frequency Spectrum Plan and revise the allocation for 2300-2400 MHz, let alone licence it under the foreshadowed new spectrum management regime.

Geographic restrictions on the use of 472-479 kHz near Exmouth in Western Australia have been lifted, because there is no longer a non-directional beacon there.

The not-so-good news

Restriction of the use of the 472-479 kHz band in northern Australia, to avoid interference with a non-directional beacon on Timor, has been retained. The band cannot be used inside a geographic region within a radius of 2000 km from the Timor NDB. Unfortunately, this extends well south into VK8, affecting amateurs from Darwin to Alice Springs, in particular. The two submissions to the ACMA sought a

reduction of the radius to 1500 km.

In addition, the submissions requested a change to the bandwidth of transmissions on 472-479 kHz, from 2.1 kHz to 2.7 kHz, so that conventional SSB could be used while still excluding full-carrier AM. The re-made LCD has stuck to the previous condition of 2.1 kHz.

You win some, you lose some

The foreshadowed geographic restrictions in the 3300-3600 MHz (9 cm) band are set out in the re-made LCD. Two blocks of spectrum, at 3400-3425 MHz and 3492.5-3542.5 MHz, **may** be withdrawn from Amateur use in limited geographic areas if licences are issued to the NBN for fixed wireless services in metro fringe and hard to service areas of the major mainland cities. The geographic areas are specified in Schedule 4A, covering the surrounds of Adelaide, Brisbane, Canberra, Sydney, Melbourne and Perth.

This does not mean that Advanced amateurs have “lost” the popular, most-used section of the 9 cm band, at 3400-3425 MHz. Outside any areas where 3400 MHz licences are issued to the NBN, it’s “business as usual” for amateur radio on the 9 cm band.

Everyone needs to read the LCD

All licensees are encouraged to read and familiarize themselves with the new LCD. It’s part of the obligations of having an Amateur licence. Prospective amateurs are made aware of the LCD and asked questions about it by WIA assessors at the time of the practical assessment.

The re-made LCD can be downloaded from the Determinations page of the website, at <http://www.wia.org.au/members/legislation/determinations/>



80 metre Loop Skywire antenna

Waratah Swinton VK4BQ

Antennas are amazing and there is nothing I like more than trying out a different antenna. I have always found it interesting that if a conductor is cut to the right size and the right shape it will receive radio signals of the desired frequencies. I live in a company house in Dysart so setting up a guyed or self-standing tower was not really a viable option for me. I started reading about different types of stealth antennas that would perform well on most bands and blend into the surroundings.

The first HF antenna that I used when I got my F call back in January was a long wire. Using the Icom AH-4 tuner, the antenna must be cut so that it is not a 1/2 wavelength on any of the required frequencies that you want to tune to. The long wire was easy to set up using a tree in the backyard and seemed to work ok.

I changed the height of my tuner once or twice and even installed some counterpoise earth wires. I only noticed small differences with each change. Weak stations that others could hear I could not, so I knew fairly early on that sooner or later I was going to need a better antenna. After many weekends reading the ARRL antenna books and searching online, the antenna called the loop skywire looked like the one for me.

The loop skywire antenna has been around for a long time and gets its name from an article published in QST magazine back in 1985. Apparently this antenna was a bit of a secret weapon and no one has

ever taken one down because it was a poor performer. Encouraged by good reviews, I started gathering my materials to set up this particular loop skywire. The loop is 20 metres each side, making a full square with a total perimeter of 80 metres. Plus or minus a few metres also works fine!

The wire I used is a Kevlar-cored tinned copper wire from TET-Emtron in Western Australia. I found TET-Emtron in the *Amateur Radio* magazine. The Kevlar core wire is very strong and being green in colour blends into the scenery. I purchased 100 metres of the wire, insulators and wire dipole centrepiece from TET-Emtron.

The local hardware shop sold 6.5 metre lengths of galvanised pipe so I purchased four of these to use as my "sky hooks". On the 6.5 metre pole I drilled and bolted an eye bolt, attached some nylon rope and a pulley to keep the antenna spaced from the pole. Using the pulley one can raise and lower the antenna as required.

The AH-4 tuner was then moved above the roofline of my house and bolted to my UHF/VHF mast. The loop skywire ends/dipole centrefeed were connected to the tuner; one end on the active side of the tuner the other to the earth side of the tuner.

Remember that installing antennas can involve some hazards. Assess the risks and put in place controls before erecting antennas. Keep them well clear from any power lines and remember to look up and live.



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Winter in the Blue Mountains

Rob Demkiw VK2TG and Ron Griffey VK2NZL



Photo 1: Portable at Mitchell's Ridge.

The RODA Technology Group, consisting of Bob VK2TG, Dave VK2BDR and Ron VK2NZL, ventured into the Blue Mountains for the Winter VHF/UHF Field Day this year which was over the weekend of 20 and 21 June 2015. The portable

station was set up on Mitchells Ridge Lookout at QF56cj on Mount Victoria west of Katoomba at an elevation of 1000 metres above sea level.

The portable station comprised yagi antennas for 2 m, 70 cm and 23 cm and vertical antennas for 2 m and

6 m all erected on masts. The radio equipment consisted of a Kenwood TS 2000X, Icom IC-910H, Yaesu FT-736, linears and associated miscellaneous equipment i.e. a trailer, awning, cooking gear and generator etc.

Two of the operators on this trip had not previously participated in a VHF/UHF field day but they were old hands on HF contests like the John Moyle field day. Although the team ventured out for a short period, contacts were made on 6 m, 2 m and 70 cm with portable and home stations in Canberra, Mittagong, Wollongong, Wyong, Yass, Sapphire and three stations in the Sydney metropolitan area. The lack of stations participating in the field day was disappointing but the inclement weather during the week and the cool temperatures must have kept operators off air. However, the main thing was that the RODA team members enjoyed themselves and made notes on how to improve the portable operations for future VHF/UHF Field Days.

AR

Photo 2: Dave VK2DBR and Ron VK2NZL at the workface.



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.

Air Marshall Sir Richard Williams KBE, CB, DSO: “Father of the RAAF” - his contribution to amateur radio

Peter Wolfenden VK3RV

Background

Air Marshall Sir Richard Williams was born in country South Australia in 1890 and was the first pilot to graduate from the Point Cook Military Flying Course in 1914. During 1916, Williams found himself in Palestine as commander of No. 1 Squadron Australian Flying Corps. In 1921, the RAAF was formed and he became its first Chief of Air Staff. A little like George Taylor the founder of the WIA and other members of the embryonic Aerial League of Australia back in 1910, Williams felt that Australia faced a greater threat by means other than sea and hence he wished to have a strong, independent Air Force (1, 3).

Controversy continued to surround Williams and his “threat theorems”, but he was eventually proved right when on 19th February, 1942, Darwin was attacked from the air - and surprisingly Williams happened to be there, en route from England to Melbourne. He saw the devastation unfold before him and one report indicated that he filmed some of it from his hotel using his 8 mm home cine camera! (2)

There were many who thought he “made enemies” through his outspoken views on the independence of the RAAF and in 1946 he was effectively forced into retirement. Williams then took up the position of Australia’s Director-General of Civil Aviation, holding the appointment for about 10 years. This coincided with the beginnings of the government



Photo 1: Air Marshall Sir Richard Williams (ex-internet Wiki).

carrier Trans Australia Airlines (TAA) and introduction of the Two Airlines Policy, so he had plenty to keep his mind active! (1)

The 1971 Remembrance Day Contest Opening Address:

In 1971, Sir Richard Williams was asked to provide the Remembrance Day Contest Opening Address This coincided with the 50th year of the RAAF.

Sir Richard Williams, KBE, CB, DSO, “Father of the RAAF” said:

When, 55 years ago, it was my privilege to go overseas on active service with Number One Squadron, Australian Flying Corp, my flight establishment included 20 wireless operators.

Wireless was then in its very early stages of development and we were able to get only two experienced men who had been employed as operators in ships. The remainder were men who expressed an interest in wireless but knew nothing of it; they had to be taught the Morse code. That was my first experience with amateur operators, they did very well indeed!

The use of wireless in aircraft at that time was limited to assistance in directing artillery fire. Messages were sent from the aircraft by means of a spark transmitter and picked up by crystal receivers on the ground, but only when the aircraft was in comparatively close proximity. Engine noise prevented messages being received in the air from ground transmitters; communication from the ground was by means of strips of white cloth laid out on the ground and so was extremely limited.

During the last two years of World War One, progress which we thought quite valuable was made in increasing the range in which signals from aircraft were received. I well remember during Allenby’s final operations in Palestine and Syria in 1918, instructing the observer in a reconnaissance aircraft, to take a transmitter and to signal back a map reference of the position of a Turkish force we expected to bomb. If I remember correctly, the distance involved was of the order of 50 to 60 miles (80 to 100 km) and because we were doubtful of

receiving a signal at that range, he was instructed to repeat at intervals during his return journey so that we would receive it as early as possible. The conditions were good and we received the first transmission. That was considered a very real achievement.

In the meantime, development was taking place in wireless transmissions between ground stations. In 1918 a powerful transmitter was operating in Cornwell and we were able to receive its signals in Palestine. Two operators would receive as best they could through headphones and although both missed letters here and there, we were usually able to make sensible news from them. I could hear nothing through those headphones!

This was the state of wireless development when the Royal Australian Air force was formed as a separate service in 1921 – 50 years ago.

In Australia at that time, the Navy was the authority in control of wireless. If I remember correctly, wavelengths were controlled and allotted by them. The navy was very jealous of this authority with the result that the first domestic service in the Royal Australian Air Force, between Point Cook and Victoria Barracks, Melbourne, had to be to the Navy's Signals Office – not our own. However service signals



Photo 2: No1 Squadron in Egypt 1917 with Major Richard Williams in foreground with cane. (AR Aug 1971).

personnel in their official as well as their private capacity, were always seeking opportunity to communicate with anyone willing to do so and this was often with amateur operators with whom technical information was exchanged.

And then in the latter half of 1929, Kingsley Love, an officer of the Citizen's Air Force and then President of the Wireless Institute of Australia, drew my attention to the work being done by members of that institute. Here were men animated not by monetary gain, but by pure interest in the transmission and receipt of messages by

wireless, who were giving much time as well as their own funds in experimenting and continually trying to contact similarly minded men in all parts of the world. They had equipment, often of their own construction, that they were prepared to man at any time without seeking reward and they were getting outstanding results. This seemed to me to constitute a body of men who in an emergency could be of the utmost national value and with the willing cooperation of members of the Institute; the Royal Australian Wireless Reserve was formed.

Many of you will know, in more detail than I, of the wonderful service given by members of that Reserve when World War Two came, as well as by other members of the Institute who served with the Navy and Army.

In the giving of that service however, a number, too many, also gave their lives and it is these we now remember through a contest which seems particularly appropriate. I can never think of those who gave their lives in war without also thinking of what they have missed. They all had the same expectancy of life as you and me and so we can say that



Photo 3: Box kite at Point Cook – source unknown, possibly internet.

they have given at least twenty six years of exciting life and being interested as they were in electronic development, what interest those years would have been to them. Could we but tell them of the development of those years and let them know that we can now communicate with men walking on the surface of the Moon and see them there on our television screens.

With those memories and with thoughts of the valuable contribution to development made by members of this Institute between the wars and more particularly by their service during World War Two and with sympathy for the families and friends of those who then gave their

lives, I wish you success in your 1971 Remembrance Day Contest, and now formally declare it open (4). (End of Transcription)

Sir Richard Williams died on 7 February, 1980.

In hindsight, and admittedly not having read all that there is available about Sir Richard, but what I have read and analysed from documents such as the 1971 RD Opening address, I am of the opinion that in him, was a man of great integrity and foresight. He also appears to be one of the few leaders who were prepared to take off his coat and personally help "trail blaze" through new technologies!

In 2005, Williams' Australian Flying Corps wings were carried

into space on the space shuttle Discovery by Australian-born astronaut Dr Andy Thomas (2).

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3. Hall, ER, A Saga of Achievement – The RAAF Radio Story, ISBN 0 9595927 0 9, 1978, Self Published.
4. Remembrance Day Contest Opening Address, 1971, Voice recording, CD8, WIA Archive.



AMSAT-VK

AMSAT Co-ordinator
Paul Paradigm VK2TXT
email: coordinator@amsat-vk.org

Group Moderator
Judy Williams VK2TJU
email: secretary@amsat-vk.org

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

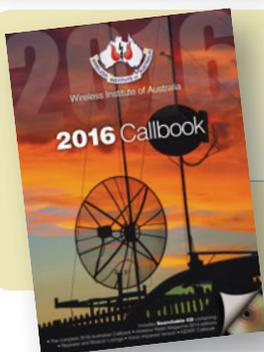
VK8MA Katherine 146.700 MHz FM

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.

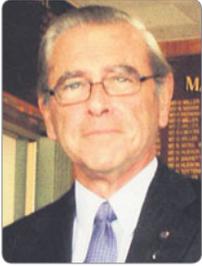
Become involved

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.



WIA **2016** Callbook
Available in October



VK3news Geelong Amateur Radio Club

Tony Collis VK3JGC

From Morse to Magnetron Exhibition

The above exhibition was located in five rooms in the east wing of Osborne House in North Geelong. The Geelong Amateur Radio Club were the recipients of an ANZAC Grant which was the motivation for this exhibition displaying the changing technology in communications from World War 1 to the 1960s Vietnam War. The project was under the direction of Barry VK3SY and Calvin VK3ZPK in conjunction with several members of the Geelong Amateur Radio Club, in the assembly of the equipment, labelling and manning the exhibition from 10 am to 4 pm Thursday to Sunday for a whole month.

On the opening night over 100 people were present listening to an introduction by the MC for the evening Barry VK3SY who acknowledged a number of special guests, including Geelong M.P. Ms. Christine Couzens, followed by the GARC President Lou VK3ALB who also acknowledged the numerous exhibit contributors amongst which were the Geelong Radio and Electronics Society, the Signals Museum, the Vietnam Veterans Association, the Geelong Military Re-enactment Group, the Queenscliff Maritime Museum and the Geelong Vintage Market.

The main speaker for the evening was Colonel John Moug (Retired) whose career included the roles of Commanding Officer of the Australian Army Parachute School, Commandant of Fort Queenscliff and whose career culminated in his attachment as the Australian Military Attaché in Seoul, South Korea. Colonel Moug spoke briefly about



Photo 1: Barry VK3SY and Calvin VK3ZPK.

the commitment of the Australian servicemen and women from WW1 to the Vietnam War and the changes in communications technology that evolved, including the 10 cm radar system developed during WW2, that were on display at Osborne House, then declaring the exhibition open.

Barry then read out a letter from Senator the Honourable Michael Ronaldson, Minister for Veteran Affairs; the Minister assisting the Prime Minister for the Centenary of ANZAC regarding the Community based ANZAC Centenary Program and the role that the Geelong Amateur Radio Club is playing within it.

Finally, President Lou VK3ALB then thanked Barry and Calvin for putting this comprehensive exhibition together and also the other members of the GARC club who had contributed so much to its establishment.

Range of the Equipment on show

The range of military communications equipment on show was extensive, covering the period 1914 to 1960, with over 200 exhibits on show; the four items selected, shown in Photo 2 are representative of the scope of the equipment on display.

The top left is the RAAF Type ATR 2B transmitter / Receiver; this was a mobile system designed for operation between 3 and 7.5 MHz for CW or Voice.

The top right is the AWA PRC F1 Transmitter / Receiver with a frequency coverage from 1 to 12 MHz in 1 kHz steps using CW, AM, SSB, with an output of 1 or 10 watts.

The bottom left is the Wireless set No. 31 man pack; the British version of the American BC 1000 covering 40 to 48 MHz having a range of around 5 miles.



Photo 2: Four of the 200 + exhibits.

The bottom right is the mule pack Wireless set 1916, kindly loaned by Ian Johnson, and this replica was the very item used in the filming of **GALLIPOLI**.

During the four weeks that the exhibition was staged it attracted, along with the Geelong community, interstate visitors from NSW and Canberra as well as interested parties from Melbourne. In addition

to the static exhibits there were also audio clips available, amongst which were the declaration of war in WW2 and the Roosevelt speech announcing the “Day of Infamy”, when the Japanese bombed Pearl Harbour.

In addition, on an ancient rear projection television set, there was a continuous video showing the activities of the RAF during WW2.

Photo 3: The Main Exhibition Hall at Osborne House.



Primarily for the younger visitors, there were several Morse key stations available with tone generators for them to spell out there names with a “Proficiency Certificate” then provided.

A Yaesu FT-991 and dipole antenna provided a communications facility under the club call sign of VK3ATL operating mainly on 40 metres during the exhibition period.

Photo 3 shows visitors to the exhibition in the main hall in the East wing of Osborne House and Photo 4 shows Courtney VK3FGRL who came dressed in 1940s fashion for the opening ceremony.

73

Tony Collis VK3JGC



Photo 4: Courtney VK3FGIR dressed in 1940s fashion.

Plan Ahead

Ballarat Amateur Radio Group (BARG) Hamvention | 25 October



Photo 1: CB transceiver modified by Darryl VK5JDS for 17 m operation.

The July meeting was a Show and Tell session. Members showed us what they had been making and told us something about the project.

The first speaker was Darryl VK5JDS who is always looking for a new project. This time he had seen a mention in a magazine that someone had adapted a CB 27 MHz transceiver to operate on 40 metres. Darryl decided to see if he could make one that would operate in the 17 metre WARC band – but first he made sure the rig would operate in the CB band!! If it hadn't worked there Darryl would have been wasting his time entirely.

It was not too difficult to tweak the rig to transmit in the 17 metre band by replacing a few components, but to tune the receiver there took a bit more work. However he has had several

contacts though there are not a lot of people using the band. Why not see if you can have a QSO with Darryl on 17 metres?

Gary VK5PCM built a fine narrow band transceiver from a New Zealand idea. He was able to make it tune very accurately between 14.2 and 14.28 MHz.

David VK5AAH was inspired by the talk by the man from ACMA demonstrated a bug detector. It detected the radio mike as well as his mobile phone. He expected the mobile phone to register but the radio mike was a surprise.

Reuben VK5FE had an amazing collection of QRP devices (transmitters on several different bands, an SWR metre for 40 metres and much more) he had designed and built. He started by building his own test equipment for QRP

work. The detail and beautiful workmanship was a joy to behold.

Jim VK5TR had been asked some questions about velocity factor in coaxial cable so he had designed a circuit to show the velocity factor and to show the difference in an open and a short circuit. All demonstrated as a PowerPoint presentation.

Roy VK5NRG, comparatively new to building amateur radio equipment tackled a QRP transmitter from a kit. It came with 48 pages of instruction, but it is going together very well even though it is a UFO (Unfinished Object) at the moment.

Phil VK5SRP had a most interesting item. He had designed this and used it at a construction night at NERC (North East Radio Club). He had mystified the members by telling them to bring along a light hammer if they had one.

When they saw the design they understood why the light hammer would be useful. Phil had devised a QRP CW transmitter, using brass drawing pins as the connections. If you have tried pushing drawing pins into a board with your fingers you will be glad to have the help of the hammer.

The last item on display was a guitar amplifier made by Graham VK5ZFZ. He described in detail all the components he had used and was delighted to be able to tell us that almost all of them had been obtained from firms within Australia, including the valves.

The chassis and much of the wiring was gold plated for better electrical conductivity, including in one instance the use of fine solid gold jewellers wire within plastic tubing.

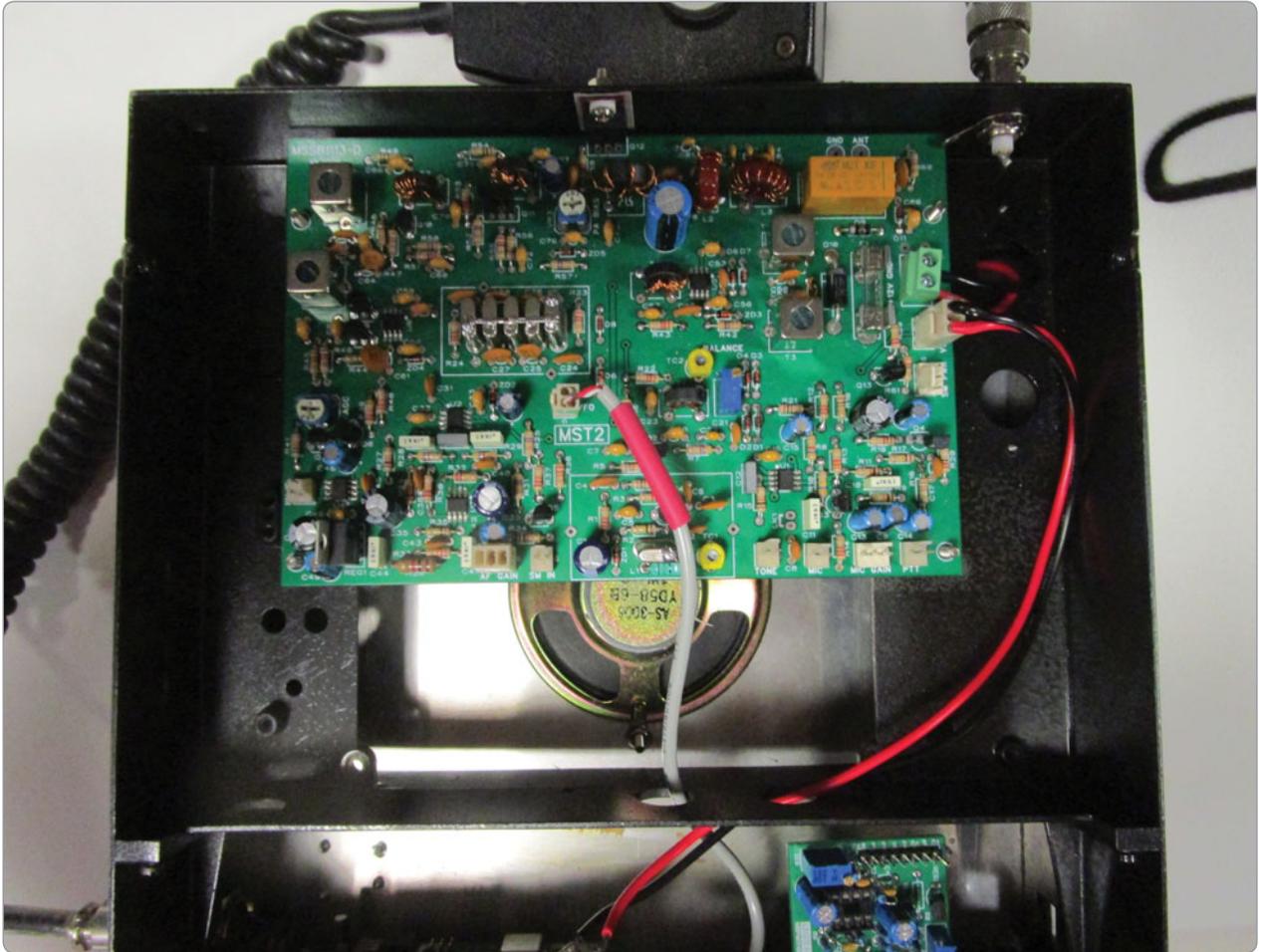


Photo 2: 40 m transceiver project by Roy VK5NRG.

Any serious guitarist would be delighted to own this amplifier.

Altogether it was a most interesting and varied evening.

David VK5KC, John VK5BJE and Paul VK5PAS had a most successful weekend with the VK100ANZAC callsign, operating from the derelict town of Farina making over 200 contacts. The operation coincided with the commemoration of a WW2 rescue attempt of the family of Charles De Gaulle. The attempt ended in tragedy, the pilot, John Napier Bell was from Farina. A book "Four men and the Walrus" details the story. Several four wheel drive groups work at the site doing restoration work.

73

David Clegg VK5KC



Photo 3: Paul VK5PAS operating VK100ANZAC from Farina.

Work the ANZAC special event stations. See www.wia.org.au



VK6news

Keith Bainbridge
e vk6rk@wia.org.au

It seems my pleas for input over the past few months have not fallen on deaf ears! Welcome to September's VK6 Notes.

A bumper crop this month and Hamfest will be done and dusted by the time you read this column, so next month's Notes will include a full report.

Bunbury Radio Club

So to business, first the Bunbury Radio Club and Norm VK6GOM:

The main activity for July was our Annual General Meeting (AGM) and the election of officer bearers for 2015/16. The following members were elected:

President

Richard (Dicko) VK6VRO

Vice President

Neil VK6FKNS

Secretary

Nick VK6FSEA

Treasurer

Bob VK6TJ

Committee

Brian VK6TGQ

Danny VK6FDRW

Darren VK6FGWN

Alek VK6AP

A warm vote of appreciation was given to the outgoing committee for the work it had performed in the preceding year. As a result of their work the club has seen a resurgence of interest and a significant growth in membership.

The next lot of licence assessments will be held on 26th September 2015 at Peppermint Grove Beach Community Centre near Capel. These assessments are available to anyone interested in obtaining an amateur licence or



Photo 1: New Committee: Back Row L-R Danny(VK6FDRW), Darren(VK6FGWN), Bob(VK6TJ), Front Row, L_R Nick(VK6FSEA), Richard(VK6VRO), Neil(VK6FKNS).

upgrading an existing qualification. Anyone interested in sitting the appropriate exams please contact Norm VK6GOM on 0438 878 582.

The 2 metre and 70 cm repeater have been down for some time and a crew consisting of Richard VK6PZT, Dan VK6FDRW, Nick VK6NA, Ian VK6MIB, Neil VK6FNKS, Darren VK6FGWN, Brian VK6HBS, Alek VK6AP and Nicholas Evans VK6FSEA ascended Harvey Heights to identify, and if possible, repair the problem. It was found the antennas had been repositioned due to some strong winds and also ingested some moisture. With the combined wisdom of this crew, the antennas were placed back into a more usable position and drained of water. The gods must have been kind, because both repeaters are back on the air. However, the crew did find mice faeces in the repeater

hut that will require some further attention.

The new Club Room at 26 Halsey St Bunbury at Richard Oxley's QTH will now be opened for use during the September 2015 monthly club Meeting. The launch of this room has been delayed due to some works falling behind.

The club has decided to purchase some high visibility vests emblazoned with Amateur Radio and BRC insignia for use by club members when conducting BRC activities in public areas and spaces. Apart from promoting amateur radio and the club it sends a signal that we are conducting safe and proper activities in public areas.

A number of members have expressed interest in attending the annual Hamfest in Perth on Sunday 9th August. Alek advises that he will reserve tables for the club.

Our next meeting on 1 August will be held in Busselton at the Busselton Masonic Centre (60 West Street). The meeting will commence at 1400, but a training session will commence at 1300 for those interested.

As mentioned last month, the club is planning to set up a station at the Casuarina (Bunbury) Lighthouse for the International lighthouse weekend on 15/16 August. Again all members are invited to attend and visitors interested in ham radio are more than welcome to attend.

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

Thanks once again Norm for the update.

Foxhunts

Next, foxhunts are once again on the agenda for Perth amateurs and here is a report from Chris VK6PII of the recent night outings.

The weekend of 4th July saw the next foxhunt take place after some considerable downtime from the last, due to a busy period in AR for all involved. Nonetheless all was as scheduled and it was on with the program.

Fox for the night was Anthony VK6AXB and Chris VK6PII. Both foxes were kept on a short leash by Simon VK6MSC and Barrie VK6SP who kept things regulated and fair for the hounds.

For this hunt an "open course" was decided on, with a starting clue to begin with to provide assistance. Previous hunts have been contained with a particular radius; however the idea behind this one was to provide a bit more of a challenging course.

A suitable site, some distance from the city was found and some sneaky mid-week propagation testing was conducted by VK6AXB

and VK6PII before the day of the Hunt.

The site chosen was the War Memorial Park, on Stirling St behind Alfred's Kitchen in Guildford. Hunters gathered at Kings Park and the fox was switched on at 1930 and the hounds were away.

Hound teams consisted of Carsten VK6FCJB, Merton VK6FMTG with his able harmonic providing snoop loop (and much needed navigation) skill, and foxhunting regulars Rob VK6LD, Jude VK6FJUD (in company with dual hounds).

After a sneaky mid-term beam shift (hey, the rules say the fox can't move - no mention of the antenna!), a suspicious vehicle containing team VK6LD arrived in the vicinity at around the 40 minute mark. Final work in the area led to them locating a slightly drenched fox at around 50 minutes, before deploying to Alfred's Kitchen for a warm snack.

After giving a secondary clue to teams at 2130 and enjoying a cup of coffee, other hunters were joined by firstly VK6FCJB (who was rightly suspicious of the gathering of people within the park!) then team VK6FMTG who used their beam antennas in short order to take care of the fox.

At the end of the Hunt some people elected to return to Alfred's to enjoy a meal and chat whilst for others the rain meant the night drew to a close.

The fox next time will be team VK6LD and the date is yet to be determined however we will keep you posted.

If you haven't had a chance to look into foxhunting yet, I suggest you do. It's great fun. Check out the website for more info. <http://www.vk6fox.org.au>

73

Chris VK6PII

Thanks Chris and Rob for permission to add this to the notes this month.

HILLS Group HARG

On Saturday 25th July the Hills Amateur Radio Group held their Annual General meeting. We kicked off with our usual barbecue at 1.00 pm but on this day we were treated to yummy hamburgers organized and cooked by Alan VK6PWD (usually we just have sausages in buns or hot dogs). Many thanks Al for a special treat on a special day. The AGM revealed that our finances are in good shape so we can keep our annual fee to an affordable \$30 for the coming year. Membership continues to grow. We now have 48 financial members. Membership renewal is now due and can be paid by EFT if required. Feel free to add a donation if you wish. See the website for details www.harg.org.au

A warm welcome is given to the following new members who have joined over the last six months: Geoff Green VK6XB, Jeff Richards VK6JKR, Richard Evans VK6BBT, Bob Duncan VK6AAH, John McNamee VK6AG, Mathew Murphy and Ian Bailey.

Elections for office bearers went very well with six members being elected with minimal arm-twisting:

President and QSL Manager
Ian Cook VK6DW.

Vice President
Ray Archibald VK6ZRW.

Secretary
Richard Grocott VK6BMW.

Treasurer
Cliff Bastin VK6LZ.

Publicity Manager
Bill Rose VK6WJ.

Shack Manager
Marty Marten VK6RC.

Thanks to those six members for stepping forward to help run their club. Further positions will be appointed by the committee as required.

We will be taking four tables at the NCRG Hamfest on 9th August and we are planning to take part in the International Lighthouse and Lightship Weekend and the RD Contest on 15th and 16th August.

HARG Meetings are held twice a month at our club rooms at the Paxhill Guide Hall near the corner of Brady and Sanderson Roads in Lesmurdie. Our Social and Practical meeting is held on the second Saturday of the month and our 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. More information at www.harg.org.au

Cheers from Bill VK6WJ
Publicity Manager for HARG.

North West Report

Jono VK6DF has an update from the other half of this State of ours, he's been busy it seems.

The weather is cool enough now in the North West to venture out and carry out some site maintenance and equipment checks. Everything in the north is huge, mining trucks, iron ore trains, cargo ships also travelling anywhere up here is huge. The day started early, departing the QTH in Karratha on the NW Coast at 6 am and travelling almost 300 km inland along the Rio Tinto rail access road (unsealed). Thankfully the access road had been recently maintained also which meant it was relatively smooth and the 80 km/h speed limit could be achieved without having everything rattled to bits. Although a long drive (even longer if you want to stay on bitumen the whole way) the country side up here is beautiful; green vegetation poking out through solid rock of the Hamersley Ranges that seem to go on for eternity and cattle from nearby stations, kangaroos and the occasional donkey strolling on by.

After cruising through the Millstream National Park, the half way point was near. A quick stop to stretch the legs, check of the tyres for signs of damage (these unsealed roads are brutal on them) a couple QSOs on 40 m and it was back cruising in the 4x4 to continue on. It's usually about 5 km or so down the access road from the half way point that the Tom Price 2 m



Photo 2: One guy wire gone. Mount Nameless.

repeater can be accessed, however it was unable to be keyed up. Various points along the way it was tried again but still no repeater tail. This was not a good sign.

It was almost 10 am, finally in Tom Price. With site keys in hand, it was time to drive on up Mt Nameless. Tom Price, the town itself, sits almost 750 m above sea level, the highest town in West Australia. Mt Nameless is another 380 m higher at around 1130 m above sea level. It claims to be the highest point in WA with vehicle access all the way to the top. From up here the view is amazing-having been up here many times before

while living/working here it still takes your breath away.

Upon reaching the site, something was noticed straight away. Some guy wires were missing!!! It appears someone had decided to take a bit of a short cut under one of the sets of guys and has gotten the vehicle hooked up on it. One turnbuckle hook bent right out and another missing an entire section of it, when it finally let go it would have made a horrible noise I dare say. Interestingly enough the wire woven through the turnbuckles to try prevent them going far if they do let go had taken off with the two missing guy wires. Thankfully the



Photo 3: The damaged turnbuckles.

tower was still standing with just the very top guy wire on one side intact. After making a few phone calls to the relevant people and making it as safe as possible with limited tools it was time to check on the equipment. Not what you want to see when you first get to site but is the exact reason why its good practice to do these site visits.

Entering the hut one thing was noticed right away: No power supply hum!

Open the cabinet door and see that everything is off and the battery backup is dead flat also. First thing to do was check to see if it was a 12 V power supply failure

or 240 V power supply failure. With the trusty multimeter it was quickly determined that it was in fact a 240 V mains failure. All except one GPO had no power. The working GPO happened to be on the far side of the hut which meant before any further work could be conducted a trip to the local shops was needed to obtain an extension cord and power board.

A friendly visit from Matt VK6MRG at the site while he was in the area, then a quick trip down and back up the hill, now with an extension cord and power board, and power was restored to the equipment.

Task #1: remove old 12 V battery backup and replace. Next on the list was to replace the small laptop used to run EchoLink and also diagnostic software for the repeater which was on loan and needed to be returned to its owner. Also a new 3G Data sim was installed which has a set data usage amount free per month, more than enough to cover the data usage of EchoLink rather than using the pre-paid service which was previously in place. Once that was completed, it was time to fire up the trusty HP 8920 and check the performance of the repeater. Satisfied with this, the VSWR meter was put in place (between antenna and duplexer of course). Happy with the equipment, some function testing with EchoLink and audio level checks were carried out.

With a couple more phone calls regarding site power, it was time to start packing up. Hopes for trying to activate Mt Nameless for SOTA was fading fast thanks to a few unplanned hurdles thrown in the mix of the trip. By the time the car was packed up, site cleaned and secured it was close to 6 pm.

Time to head back down the hill and drop the keys off before making the near 300 km trip back home checking the coverage along the way.

Finally pulled up in the drive way at the QTH, just gone 10 pm. 16 hours and 600 km later, one of the three repeaters in the region is happy and healthy and ready for action. Can't say we are not dedicated up here. VK6RTP is on 146.625 -600 kHz offset, EchoLink node name is VK6RTP-R and number is 702159.

73 from Jono VK6DF.

Thanks Jono, a busy trip indeed, but worth it for the scenery I know from experience!

WA VHF Group

Time for the VHF Groups turn, thanks Terry:

Well, the WA VHF Group club activities on Saturday 11th July of

constructing Yagi antennas for the 70 cm beacon of VK6RST couldn't have come at a better time. This is especially interesting as photos recently supplied by Rob VK6LD showed the remains of the easterly pointing 10 element Yagi reduced to two elements by corrosion, cockies or sheer old age. Members were handed out worksheet specifications created by the "Yagi Calculator for VHF/UHF" software by John VK5DJ originally derived from the original DL6WU software of the same name. This software has proven to be reliable with repeatable results. Efforts of Ty VK6HTY and Alan VK6AMH and Denis VK6FADF must be acknowledged in constructing the new antennas with one nearly ready to test on the day. All in all, members were encouraged enough to start thinking about constructing antennas for their own particular needs.

73 Terry VK6ZLT

Activities Officer, for the WA VHF Group Inc.

NCRG

Now Stuart VK6LSB, President of the NCRG had a bit of a trip that he

would like to report on so over to you Stu:

Thanks Keith,

Two years ago three members of the NCRG went to the Friedrichshafen Ham Radio Show in Germany. Unfortunately I missed out due to the cost of the flight, which, in matter of a day from when I decided to go till I went to book had gone up over \$1000.

They say patience is a virtue, so when Andrew VK6IA asked me in July 2014, if I would like to go Friedrichshafen in June 2015. I decided 2015 was my year to go and after paying for the airfares in January, I couldn't wait for my holidays.

June 23rd came very quickly, we were off and after a long flight of 20 hours or so we landed in Munich. The following day we arrived in Friedrichshafen via a two hour train ride, booked into our hotel and went for lunch and a few German beers.

Friday morning, Andrew and I caught the free bus to the Messe Friedrichshafen; we waited in line for our 3-day passes and entered the Pavilion with thousands of other hams. I stood there spell bound,

the size of the halls and all just for amateur radio, I was in ham heaven and I didn't know where to look first.

We had a plan to start on the left and work around the outside to the middle; again and again we were side tracked.

There was a plethora of exhibitors and traders at the first hall. The main Hall had the major radio exhibitors; Icom, Kenwood, Yaesu, Flex, Luso Towers, Micro Ham, Khune Electronics, SSB, Rig Expert and many other radio company's. Some of the other traders were Wimo, Difona and many more, lots of radios, antennas, base Yagis and mobile whips, connectors, coax, mounting brackets, rope, climbing harnesses and more.

The other two halls are for the flea markets, full of test equipment, connectors, second hand radios, components, masts and anything related to ham radio, the halls are just huge and full of tables.

The last hall was the Makers hall, a new idea for this year, 3D printers, computers and electronics experiments and some of the displays were pretty good and interesting.

I am glad we allowed the full three days, the best part was meeting other hams from around the world having a beer with them and putting a face to a name, next time I would like to do some of the seminars and yes I would go back again hopefully in 2017

The Friedrichshafen Hamfest ended too quickly for me, we had a final dinner at a bar overlooking Lake Constance, a few beers and it was time to leave, next stop England to meet Andrew's relatives.

We picked up the hire car and with a Yaesu FT-817 and a 2 m/70 cm hand held, we found an amateur radio shop and bought a mag base, fitted a 2 m/70 cm antenna to the hire car, and drove around England.

Photo 4: VK6IA & VK6LSB at Friedrichshafen.





Photo 5: Flea market Hall at Friedrichshafen.

My first time there I should add.

What I found was they only have 144 MHz to 146 MHz with 12.5 kHz spacing; the bands are in constant use, compared to our 4 MHz bandwidth which hardly gets used.

We did visit Jodrell Bank Observatory in Cheshire, I would like to use that dish for an EME project! We had to turn off our phones and radios while we were there. It was a four hour round trip

from where we staying.

It was a great experience to drive in UK, and as we dropped the hire car off, and getting on the plane (upgraded to business class) I knew the holiday was over.

I have to thank a number of people, firstly Andrew VK6IA for being a great friend and a great travelling companion and Eileen for letting Andrew go on holidays, thanks Eileen. Also thanks to

Andrew's Mum and Dad, Pam and Peter VK6PA, relatives in England, Wendy and Bob, Jane and Derrick, Sheila and Kerry for making me feel so welcome in the UK and my Mum and Dad, Sue and Chris.

It was a great holiday and the best part was a trip to ham heaven.

A quick joke, what do you call 6 hams in a mini bus, a ham sandwich, that was told to us by Jason from Innovative Antennas when we shared a maxi taxi to the show :(

And please use our bands, see you out there.

73

Stuart VK6LSB & Andrew VK6IA.

Thanks Stu, I know how much I enjoyed my visit there three years ago, and to add to it a trip to the UK for the first time would have been fantastic.

Finally a last comment from me on behalf of the NCRG, as I write this Hamfest is 10 days away so hopefully all of you who made it to the event had a great time, enjoyed the fellowship, and hopefully won a raffle prize!! And see you again 2nd Sunday in August 2016.

73 de Keith VK6RK.



Icom is proud to announce the ***D-STAR QSO Party 2015.***

This will be hosted between **September 18th at 0:00 and September 20th at 24:00 (UTC).**

With the goal to communicate with other *D-STAR* operators in as many different countries as possible, this annual competition promotes Amateur radio throughout the world.

For further information, including prize details, visit <http://www.icom.co.jp/world/dqp>



VK2news

Tim Mills VK2ZTM
e vk2ztm@wia.org.au

Its spring – hopefully - after a cold winter in many parts of the country. At the end of August, ARNSW is planning a field day on Sunday 30th for both new and old amateurs who are asked to register by an email to newham@arnsw.org.au to help with planning and catering. Details have been in VK2WI News. In September there is the next Foundation weekend and assessments on the 19th and 20th. Bookings required by an email to education@arnsw.org.au The Trash & Treasure Sunday is on Sunday 27th September. A Deceased Estate provided a wide range of HP test equipment in the past few weeks.

Westlakes ARC were unable to work the Lighthouse weekend from their regular Norah Head lighthouse after their year-long booking, with deposit, was over ridden by a wedding party taking all the site accommodation. This month is their annual field day on Sunday 13th which includes a big raffle of a radio transceiver as part of their annual fund-raising.

For Clubs trying to keep a regular meeting location it is often

difficult. The **Manly Warringah RS** for some years has had access to a Guide Hall at Terry Hills which was vacant. They then found that there were moves to have it sold. Fortunately the Scouting side took control and now they have some long term access. Don't forget their Flag Pole contest this month. Details were in the August issue of AR.

The **Liverpool and District ARC** is a club with falling membership and a meeting was to be held last month to determine their future. The **Chifley ARC** at Mt. Druitt for many years has met every Saturday in a church hall. They have developed it into an extensive station installation. The church now wants the space for other activities.

The Anderson power connectors are finding increasing use within our ranks. The **Waverley ARS** has developed a PowerPole Distribution Box of six fused sets of connectors which is available in kit form. Check out the details under Projects at vk2bv.org It is available from stock at \$35 plus postage. This month is also the next Foundation and assessment weekend at the Rose Bay location of the club on Saturday 12th and Sunday 13th. Bookings at education@vk2bv.org

Alan VK2ZIW, Secretary of the **Blue Mountains ARC**, raises the problem confronting many clubs and groups with that of repeater maintenance. Alan comments that while most groups do maintain their own systems, there are less skilled people

now in the two way radio industry and most are too busy to volunteer to take on amateur installations. Alan notes the extensive network of the Western Australia Repeater Group which provides for a wide area of support and maintenance for their network. He asks, could VK2 establish a similar State wide support scheme?

While on the subject of repeaters, Steve VK2MD as part of the WIA NTAC has been trying to update the details of many systems throughout VK2 and elsewhere. There were several in VK2 that he has been trying to find an email contact – if you can help with details on any system - email him at tacrep@wia.org.au

Last month saw AGMs for WICEN NSW and Oxley Region ARC. **WICEN NSW** has recently changed their postal address to be a neighbour with ARNSW at the Dural Delivery Centre. 2158. Their box number is 6151.

The AGM for the **Oxley Region ARC** was held on Saturday 1st August with the following officer bearers being elected:

President is Lyle Smith VK2SMI who also has publicity;
Vice President is Richard Court VK2CHC;
Secretary is Henry Lundell VK2ZHE, who also has the roles of Public Officer;
Repeater Chairman, VK2BOR
Station Manager and WIA Liaison delegate;
Treasurer is Larry Lindsay VK2CLL and also Education Officer;
Committee members are Stuart Walsh VK2FSTU, Paul Colledge VK2ICQ and also Web Master, and Bill Sinclair VK2ZCV who is also Member Liaison Officer;
Oxtales Editor John Hansen VK2AYQ with Trevor Thatcher VK2TT as Co-editor;
Welfare Officer and Social Director is Barry Gilson VK2LBG and Club Historian is John Bailey VK2KHB.

73 – Tim VK2ZTM

July 18th & 19th was the Foundation Weekend at the ARNSW facility in Dural. Congratulations to the new amateurs who passed their foundation. From left to right is Greg VK2KGGH (visiting), his daughter Sarah, Michael, Errol and Edwin. (Photo by Paul VK2APA).



Grant Willis VK5GR

FreeDV HF Digital Voice QSO Party Weekend!

The Amateur Radio Experimenters Group would like to invite all amateurs interested in HF digital voice communications to join us on the weekend of September 12th and 13th in a FreeDV Codec2 digital HF voice QSO Party! AREG in conjunction with David VK5DGR, one of the co-creators of FreeDV, will be activating a FreeDV HF station across the weekend under the Wireless Institute of Australia (WIA) special event call-sign VK100ANZAC. The aim is to encourage as many amateurs as possible to “come and try” this new digital HF mode, joining us and as many other FreeDV operators as possible in making contacts via digital HF voice around Australia and across the world.

Various bands will be used, with the primary call channels being 14236 kHz +/-QRM and 7175 kHz. The VK100ANZAC net control station will be listening and intermittently calling on FreeDV on the following bands:

- Saturday evening September 12th from 1130 UTC (9 pm Australian Central Standard Time (ACST)) beaming short path North America on 20 m (west coast)
- Sunday morning September 13th from 2130-2330 UTC (7 am-9 am ACST) on 20 m beaming long path North America (east coast)
- Sunday morning from 2230-0130 UTC (8-11 am ACST) will see local VK contacts targeted on 40 m
- 0430-0730 UTC (2-5 pm ACST) will focus signals towards Europe Long Path as well as VK on 20 m
- 0530-0830 UTC (3-6 pm ACST) will see 40 m targeting VK/ZL again
- During the middle of the day on Sunday we may activate on 15 m as well targeting Asia/Japan/

Northern VK. Keep watching the AREG blog for details.

So, what is FreeDV you might ask? It is a new digital voice mode developed by an international group of amateurs, led by David Rowe VK5DGR. David was recently awarded the Ron Wilkinson Achievement Award for his work on Codec2 and FreeDV by the WIA. FreeDV operates at very low bitrates and narrow bandwidths using an open source digital voice compression algorithm (Codec2) developed by David. As such, it is ideal for use on HF. What's more, being completely open source, it can be reproduced and adapted/extended by anyone who is prepared to follow the open source philosophy, unlike some other systems which have proprietary elements that limit experimentation.

Why may you ask are we doing this? Like all new modes in their early days, like the early SSB developments in the 1960s, finding like-minded stations to make contact with can prove a little difficult. The aim behind this global event is to gather multiple FreeDV stations on air so that beginners in the mode can find others to make contact with, as well as providing support and help via SSB for those struggling to get the new technology to work. It is the perfect opportunity for you to dust off your radio-PC interfaces or finally wire-up your SM1000 digital voice adaptor and give this unique mode a try!

How do you get involved? There are several ways to get on the air with FreeDV. The most common is to download and install the FreeDV GUI application on your PC, and use a PC to HF radio interface, and a USB headset. More recently the stand alone SM1000 digital voice adaptor has become available which eliminates the need for a PC. Details of how to set up your station

to run FreeDV can be found from the Amateur Radio Experimenters Website (www.aretg.org.au) or from the FreeDV project's website <http://freedv.org/>

Technical support during the event will be available via Internet Relay Chat (IRC) via the #FreeDV channel on irc.freenode.net. (<http://webchat.freenode.net/?channels=freedv>)

The VK100ANZAC link

The idea behind operating the FreeDV QSO party net control station using the special event call sign VK100ANZAC was to provide a little extra incentive for amateurs to come and try this new HF digital mode. It will certainly provide a unique QSO opportunity! The weekend in question is also one of significance for the ANZAC story as it commemorates the 26th Infantry Battalion's arrival at Gallipoli and their subsequent deployment to Taylor's Hollow on September 12, 1915. Part of the event will commemorate those who served and the sacrifice they made.

Conclusion

We look forward to making contact with you over the weekend! If you want more information, keep watching the AREG website for regular updates and blogs of the weekend's events as well as for information on operating FreeDV at www.aretg.org.au

All contacts made will be recorded in ClubLog. Qrz.com will also be updated with the latest QSO information. We will also QSL any cards received either via the Bureau or via EQSL. SWLs will be eligible for a special card if they can confirm a full two way QSO.

Plans are also being worked on for a test and tune event the weekend beforehand. Keep watching the AREG website for details. See you on the air!



VI3ANZAC Event – Eastern and Mountain District Radio Club

Peter Hartfield VK3PH and Andrew Scott VK3BQ

The Eastern and Mountain District Radio Club (EMDRC) was allocated the callsign VI3ANZAC for the week commencing 20 July to commemorate the Kokoda Track campaign. The Kokoda Track campaign was part of the Pacific War of World War II. The campaign consisted of a series of battles fought between July and November 1942 between Japanese and Allied – primarily Australian – forces in

what was then the Australian territory of Papua.

Following a landing near Gona, on the north coast of New Guinea, on the night of 21/22 July, Japanese forces attempted to advance south overland through the mountains of the Owen Stanley Range to seize Port Moresby as part of a strategy of isolating Australia from the United States. Initially only limited

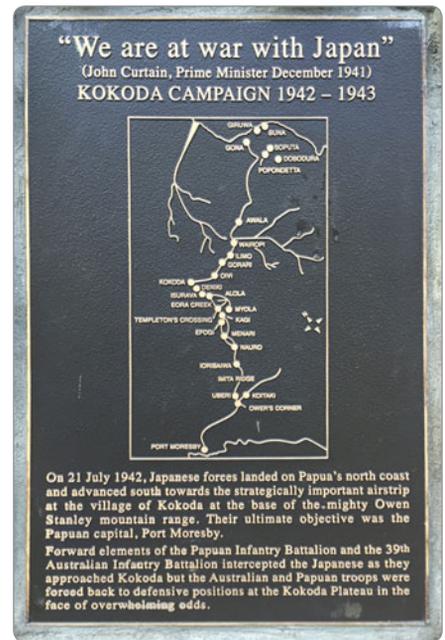


Photo 1: Club members and guests in attendance.





Photo 2: Jack VK3WWW operating from the club rooms.

Australian forces were available to oppose them, and after making rapid progress the Japanese South Seas Force under Major General Tomitaro Horii clashed with under strength Australian forces from the Papuan Infantry Battalion and the Australian 39th Battalion on 23 July at Awala, forcing them back to Kokoda.

Following a confused night battle on 28/29 July, the Australians were again forced to withdraw. The Australians attempted to recapture Kokoda on 8 August without success which resulted in heavy casualties on both sides, and the 39th Battalion was subsequently forced back to Deniki. A number of Japanese attacks

Photo 3: Hiro VK3EHG operating CW.



were subsequently fought off by the Australian Militia over the following week, yet by 14 August they began to withdraw over the Owen Stanley Range, down the Kokoda Track towards Isurava.

The club rooms were open nightly for members to join in by operating the club station using the special event callsign. On the Friday night we brought in pizzas and had about quite a few members in attendance.

On Saturday 25th July, we setup a portable station at the top of the 1,000 steps memorial at One Tree Hill in Ferntree Gully. Located within the Dandenong Ranges National Park, the 1,000 steps Kokoda Walk is a unique and renowned tourist spot at Mt Dandenong. The 1,000 steps boast the Kokoda Track Memorial Walk, a popular walking trail of this area. Nicely maintained by rangers, the Kokoda Track is a beautiful walking track with adjacent forested areas, bushlands and various scenic points.



Photo 4: Greg VK3ND on the BBQ.

Throughout the day we were visited by many members and guests with plenty of interested onlookers and a BBQ to feed hungry onlookers.

Special thanks to Jack VK3WWW for organising this event and for persisting while unwell over the weekend.



ALARA

Christine Taylor VK5CTY – Publicity Officer

ALARA Award

Well, the Remembrance Day Contest and the ALARA Contest are both over now so you can breathe a sigh of relief. Hope you had good Contests. Also hope you thought to make enough contacts with YL members so you can apply for the very attractive ALARA Award. Look in last month's note for details and send your application off to Marilyn VK5DMS, our Awards Custodian, through the ALARA website.

ALARA events

VK5 News

After using the same venue for a number of years, the YLs in VK5 have decided to try somewhere else. We tried the London Tavern again after many years but found it was very busy and noisy. We tried the Café One2Nine in the Criterion Hotel but too many others have also found that one, so we are still experimenting. Please, if you are in Adelaide and would like to join us on the second Friday of the month, you are very welcome. Contact either Jean VK5TSX, our State Rep., or Tina VK5TMC, our President (QTHR the call book).

We did have a visitor in July: Sharon ZL3AE who has friends and relatives in Adelaide comes across the water fairly frequently. This time she was in VK5 to house-sit and dog-sit while her friends went overseas. Jenny VK5FJAY keeps in regular touch with Sharon so was able to tell her about our new venue.

VK3 News

Gippsland Gate REC invited local ALARA members to their Christmas in July Luncheon to celebrate ALARA's 40 years and to thank us for support at their Hamfest. We met at the Arthur's Seat Hotel where the views are magnificent and the food was delicious. A good mixture



Photo 1: ALARA members and friends lunching at Arthur's Seat Hotel with GGREC.



Photo 2: Kitchen helpers Jean VK3VIP, Pat VK3OZ and Sharon from GGREC.

of YLs and OMs enjoyed meeting old friends and making new ones.

Several ALARA members attended the GGREC Hamfest to help out in the kitchen as they were shorthanded. The GGREC team and all the visitors were all hungry on a cold but sunny day.

ALARA Special Event

The 40th Birthday Celebration Friday July 24th 2015

26 YLs and OMs met at the Mountain View Hotel for dinner and the final planning for the next day's events.

Saturday July 25th 2015:

ALARA Luncheon

There were 52 YLs and OMs at the Birthday Luncheon held at the Novatel Hotel in Glen Waverly, Victoria. Most of the Australian states were represented, including VK6 (Bev VK6DE from Geraldton) and

VK7 (Linda Luthor VK7QP).

ALARA President Tina VK5TMC welcomed all who were attending and introduced the first of the speakers who were to share the history of ALARA with us all.

ALARA Publicity Officer Christine VK5CTY spoke about pre-ALARA history

The first YL amateur was Florence McKenzie (nee Wallace) (1923??) who was initially a fully qualified electrician installing electricity in houses when domestic electricity was in its infancy. She became interested in amateur



Photo 3: Christine VK5CTY sharing the early history of ALARA. Photo by Robert Broomhead VK3DN.

radio from the customers asking for strange items in the shop that she and her husband ran. Mrs Mac, as she was known, later taught over 30,000 'boys and girls' Morse code, so they could serve as telegraphist in all the services, during the Second World War.

Some of the other early YLs were a 12 year old, Madeline

McKenzie VK4YL who won several British Empire Contests on CW and Joy VK2EBX who became interested in amateur radio by listening to the truckies on CB. She also won several Swagman Awards for her poetry. Joan VK3BJB gained her licence so she could talk to her OM when he was away driving his truck and eventually started talking

Photo 4: Florence McKenzie Trophy awarded to CW champion of the ALARA contest. Photo by Leon Duturbure VK3DTL.



to the Japanese sailors she heard. Later she ran a regular sked for all ocean sailors so they could keep in touch with each other and with their families.

ALARA Foundation member Norma VK2YL then spoke about the beginning of LARA which later became ALARA

This all started when two 18 year old university students thought it would be a good idea for YL amateurs to have an organisation of their own. At the time there were also a number of YLs and XYLs who regularly attended Hamfests with their OMs. They also thought it was a good idea to have their own group, and so LARA came to be, with one of the 18 year olds as its first President. In the following year, the name was changed to ALARA as members were joining from all over Australia.

We were delighted to have both the young ladies (Norma O'Hare VK3AYL, now VK2YL, and Rhonda De Stefano VK3AQZ) who, as 18 year olds, started ALARA, as well as Myrna VK5YW who ran the first ALARA Net, and Kate Duncan with Bev VK6DE who were all Foundation members. There were a number more who joined within the first two or three years and many more who have joined very recently.

At the end of her talk, President Tina VK5TMC presented Norma VK2YL with a trophy commemorating the beginning of ALARA 40 years ago. Norma was astounded that ALARA still existed and how well it is progressing.

President Tina VK5TMC then asked the Foundation members attending this celebration to cut the celebration cake together.

Jenny VK3WQ, showed some very interesting photos from over the last 40 years

Our third speaker gave us a picture of how ALARA had developed from the first Net, to have our own Contest and to have overseas members. ALARA was the third or fourth YL association to be



Photo 5: President Tina VK5TMC presenting Norma VK2YL with her trophy. Photo by Leon Duturbure VK3DTL.

It was a happy, noisy party, and friendships were renewed or made which is exactly how amateur radio works. Our hobby allows us to meet people from everywhere on air so that when we meet in person we are already friends.

Sunday July 26th: The Bus Trip

On a chilly but sunny Sunday morning, 25 local and visiting ALARA YLs and OMs boarded a very warm bus for a trip around Melbourne. The first stop was at the Shrine of Remembrance for an hour tour where we visited the new galleries amid the old rooms. The lifts were a bonus for those of us who find steps testing and the hour passed very quickly. This is an excellent site to visit.

There was no time wasted in boarding the bus again but we were early.



Photo 7: Jenny VK3WQ during her presentation. Photo by Robert Broomhead VK3DN.

David, the bus driver, took us around some of Melbourne's interesting sites and even convinced some that he was lost – ha ha! We arrived at the Retreat Hotel in Abbotsford, where more ALARA YLs and OMs were waiting, for an excellent lunch.

The next stop was at the Queen Victoria Market where some found lots to buy.

After dropping Christine VK5CTY at Southern Cross Station, we were taken back to the Novatel to say our goodbyes.

It's ten years to the next one!
33, Christine VK5CTY.



Photo 6: Attending ALARA Foundation members cutting the cake. L to R: Myrna VK5YW, Norma VK2YL, Kate, Rhonda VK3ZYL, Linda VK7QP. Photo by Leon Duturbure VK3DTL.

formed, after YLRL in the US and WARO in New Zealand. From the beginning YLs around the world sponsored each other into their groups reciprocally. Many firm friendships have grown from those sponsorships.

If it all sounds very formal, this is not so: it was a very pleasant day and one from which we had to be 'chivvied' out of their room for another function.

Thanks go to Jean VK3VIP and her many helpers for making the whole day work so well and for giving us the opportunity to celebrate 40 years of YLs in amateur radio. We enjoyed a very tasty meal and the cake was an enjoyable dessert.



Photo 8: The ALARA VK3 team who put it together. L to R: President Tina VK5TMC with Jean VK3VIP, Kaye VK3FKDW, Margaret VK3FMAB, Donna VK3FRET, Jenny VK3WQ. Photo by Robert Broomhead VK3DN.

Keith Gooley VK5OQ



Photo 1: The five beacons installed on the Water tower: three enclosures near the centre are the 3.4, 5.7 and 10 GHz units. The enclosure below and to the left of centre houses the 1.2 and 2.4 GHz beacons.

New Microwave Beacons for the Elizabeth Amateur Radio Club

The Elizabeth Amateur Radio Club in the northern suburbs of Adelaide is fortunate to be able to rent space in the old Water tower at Elizabeth South. This 50 metre high concrete structure was once used by South Australia's water authority but it is no longer used for water storage and is owned by the local council. The Club pays a quite modest yearly rental for space in this tower but as bureaucracy would have it, the rent is indexed to the CPI. Anyway that is beside the point. The tower houses the Club's 6 metre, 2

metre, 70 cm and 23 cm repeaters as well as the VK5WI beacon on the 10 metre band. The weekly WIA news broadcast is transmitted from the Water tower on the 70 cm repeater, on a dedicated 100 watt 2 m transmitter and on the 160 m band.

In recent years a number of club members have taken an interest in the microwave bands above 1.2 GHz. Most operation happens during the various field day contests held throughout the year. This interest has led to the construction and installation in the Water tower of five beacons for the 1.2, 2.4, 3.4, 5.7 and 10 GHz bands.



Photo 2: Damien VK5FDEC with the 3.4 and 5.7 GHz beacons. The 10 GHz unit is yet to be installed at the time of taking the photo.



Photo 3: Damien VK5FDEC attaching a guy wire to the rim of the tank over 50 m from the ground. The GPS antenna for the reference is at the lower right.

The project had the generous assistance of Allan Devlin VK3XPD and the WIA. Allan offered a grant of \$100 for beacons which were frequency locked to a GPS based reference. This was matched by the WIA.

The five beacons were built by Iain VK5ZD with assistance from other club members. They are housed in four outdoor enclosures, with the 1.2 and 2.4 beacons sharing an enclosure. Antennas are slotted waveguides with the exception of 1.2 GHz which is an array of three vertically stacked Bi-Quads, horizontally polarised with a gain of about 12 dB. The four lowest band antennas are omnidirectional while the 10 GHz waveguide antenna has slots on only one side, giving it 180 degree coverage.

A separate enclosure houses the 10 MHz GPS locked reference and the power supply with battery backup for the reference. If mains power is lost, the reference will remain on and locked and when the power returns, the beacons are back on air immediately with accurate frequency. It was found necessary to have a GPS antenna mounted remotely from the beacons due to overload of the GPS receiver by the beacons. The antenna was mounted on the side of a crank-up lattice tower with the closest beacon antennas on the opposite side of the tower. The separation was about two metres but this was found to be enough.

Installation

The top of the Water tower is a large open topped tank which

formerly held water. In the centre is a “snorkel”, a concrete tube about 1 metre in diameter with 150 mm thick walls. A ladder up the centre gives access to the top, while another ladder down the outside allows access to the bottom of the tank. The five beacon enclosures and the antennas were mounted on two metal (one steel and the other aluminium) tubes about 50 mm diameter. They are held in brackets bolted to the concrete such that they can be raised and lowered to get at the various parts of the system.

It was decided that the fixing holes for the brackets should be drilled right through the 150 mm of concrete as previous attempts with various types of blind hole fixings had not been reliable. Reliability



Photo 4: Keith VK5OQ with the reference and DC distribution unit in place on the Water tower.

is paramount here as to get at the top of the water tower requires climbing six vertical ladders about eight metres each. Drilling 16 mm diameter holes 150 mm through high strength concrete required a large hammer drill which had to be hauled the 50 m up the tower. The brackets were bolted to the

concrete with 12 mm threaded rod with stainless steel nuts on each end.

Once the brackets were in place, the tubes could be dropped in and the antennas and enclosures bolted to the tubes which were then raised to the required height. Cables for power and the 10 MHz reference

were run from the power/reference box to the beacon enclosures and protected with corrugated split conduit.

The beacons can be heard at elevated sites over large areas of the northern Adelaide Plains, around the northern hills face and the hills face south of the city where line of sight to the Water tower is available. A better idea of the coverage of the beacons relies on getting more reports.

Acknowledgements

As mentioned previously, construction of the beacons was by Iain VK5ZD, the machining on some of the waveguide slot antennas was by Paul VK5VCO, John VK5NI manufactured the mounting poles and brackets with help from Dennis VK5FDEN and Paul VK5VCO. Paul and John made the reference and DC distribution unit and Paul also installed the DC feed cable up the snorkel on the mains power supply on the fifth level of the tower. Keith VK5OQ and Damien VK5FDEC, with help from John VK5FAGB, did the main installation of the beacons.

73, Keith Gooley VK5OQ.



VK2news

Richard Murnane VK2SKY

Manly-Warringah receives funding

As announced in the August edition of *Amateur Radio* magazine, the Manly-Warringah Radio Society received a donation from Amateur Radio New South Wales to fund the development of an open-access, web-connected, Software Defined Radio receiver. Hardware and software development for the project has already commenced, and information on accessing the receiver will be published in *AR* when the receiver goes



ARNSW Secretary Tim Mills VK2ZTM handing over a cheque for \$2,190 to newly-elected club President Geoff Van Der Wagen VK2AVR at the club rooms in Terrey Hills.

live. Progress reports will also appear on the club web site, www.mwrs.org.au

The Manly-Warringah Radio Society wishes to express its appreciation for Amateur Radio New South Wales' support of the project, and looks forward to making the receiver available to the broader amateur radio community.



The installation of the new “RTOF” Radio Training and Operations Facility is well under way with the good news that a grant was obtained from The City of Brisbane Lord Mayor’s Suburban Initiative Fund. This grant provided for the fit out of the facility including a wheel chair access ramp.

After a couple of working bees the facility is now in place with the renovation almost complete.

The club is fortunate to be co-sited with the Rochedale Scout Group using their Scout Hall for meetings and lectures, but we needed a separate area to conduct on-air training and general

communications. The 6 m x 3 m demountable building has fulfilled this need. It will also serve us well as our radio room for field days and JOTA.



Photo 2: The interior after re-sheeting.

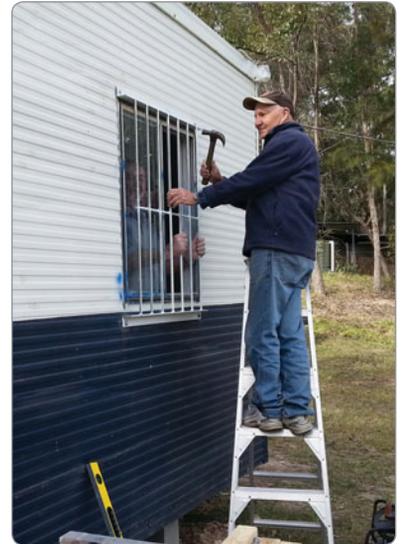


Photo 3: Club members Howard Bone VK4NX installing safety grills along with Chris Bourke VK4YE.

Photo 1: The facility in position.





VK7news

Justin Giles-Clark VK7TW

e vk7tw@wia.org.au

w groups.yahoo.com/group/vk7regionalnews/

VK7 Repeater News

The relocation of VK7RAA from Mt Barrow to Mt Arthur is progressing with agreement reached and NTARC purchasing the assets of the Launceston Repeater Association and agreeing to maintain the CB repeater LNC02 for the lease period. Licensing has been renewed with ACMA for the CB repeater. The last hurdle is the finalisation of the lease with Parks and Wildlife which is progressing well. The existing VK7RAB licence on Mt Arthur will be merged into the relocated VK7RAA licence thus reducing fees. Maintenance has been carried out on the Snow Hill VK7REC repeater with the bent mast section replaced resulting in coverage improvement. Thanks to Al VK7AN, David VK7JD, Joe VK7JG, Tony VK7YBG and Peter VK7PD.

There is a new 6 m repeater with VK7RCH on Grey Mountain in Southern VK7 thanks to Hayden VK7HH and Michael VK7MRS. Frequencies are 53.7 MHz output and 52.7 MHz input.

CCARC is now in possession of a D-STAR repeater with the intention of deploying to Mt Duncan VK7RMD. Dion VK7DB is currently undertaking a trial on the temporary frequency of 438.575 MHz with a -5 MHz offset in the Ulverstone area.

Cradle Coast Amateur Radio Club

We congratulate Aaron from Burnie and Mathew from the Wynyard who both successfully passed their Advanced licence assessments from the classes that CCARC ran over 12 weeks. Congratulations and welcome to the bands.

Northern Tasmanian Amateur Radio Club

Congratulations to Kevin VK7FKJL who successfully passed his Advanced licence assessment with Aaron and Mathew in the CCARC assessment and has applied for VK7KJL. We also congratulate Lachlan Hindrum who successfully passed his Foundation licence assessment. Lachlan's interest was sparked from participating in JOTA over the last two years with NTARC. We welcome these new amateur to the bands.

NTARC's July meeting consisted of a quick business meeting and then Al VK7AN presented his recent DXpedition to Norfolk Island with David VK7YUM. Al gave an overview of Norfolk Island, including life on the island, the economic situation and operation of amateur stations. This was followed by a question and answer session. Thanks Al.

Kevin VK7HKN held a flowerpot antenna building class with seven attendees. These dual band UHF/VHF antennas are a great project and each attendee left with a

tested and working antenna to rival commercial quality antennas. Great stuff Kevin!

Radio and Electronics Association of Southern Tasmania

REAST's July Presentation was given by new member Ian Macintosh on the open source laptop – Novena and integrated Myriad RF SDR. Ian started by describing himself as an "Open Source Zealot" and his motivation for delving into the Novena Open Source Notebook platform.



Photo 1: Ian Macintosh, presenter of Novena Open Source Notebook. Photo courtesy of Justin VK7TW.

Ian described the architecture and kit construction. This crowd funded project was well funded and with the built in Myriad RF SDR board it was of great interest to those who came along to the presentation. There was a demonstration of both the notebook and the SDR which covers 300-3800 MHz. A huge thank you to Ian for coming along.

We welcome Larry Hower VK7WLH as Vice-President following the resignation of Ken VK7DY. Larry brings a wealth of knowledge and amateur radio experience from the US and we look forward to what Larry has to offer. Our DATV nights continue to expand with the author showing how he captured the 2015 Leap Second.

Our show and tell included Azimuth/Elevation mounts, PS-46 updates, Ben VK7BEN showed his use of RUMLog2Go connected to a RaspberryPi to encapsulated serial signals to control his Icom radio, we also had a series on the cold war Numbers stations, MUF maps, SOTA snow trials, Moore's Law, polyphonic singing, percussion concerts, iPhone lenses, P3E satellites and their orbits. Our videos included historic amateur radio, geology, FreeDV, cold war numbers machines, AMSAT UK videos, Ham College from the AmateurLogic.TV guys, VK7 Auroras and Michael Ossman from Hack RF fame. Interested? You can see us Wednesday nights from 7:30 pm AEST on batc.tv members stream – VK7OTC.



Photo 2: 2015 Leap Second captured by the author on his GPS Disciplined Oscillator. Photo courtesy of Justin VK7TW.



Photo 3: Novena Open Source Notebook with Myriad RF SDR (top lefthand corner). Photo courtesy of Justin VK7TW.



Wireless Institute of Australia has answers on-line

The WIA web-based resources with 2,500 pages make for plenty of good informative reading. Modern organisations use this technology to serve their members, prospective members and other stakeholders.

The WIA is no different, relying heavily on providing services and carrying out its role through the webspace and on-line.

To further help, it now has a Frequently Asked Questions section. If you have a question, then it may be answered by reading this, and the other website material.

Check out the WIA website at www.wia.org.au



Spotlight on SWLing

Robin L. Harwood VK7RH
e vk7rh@wia.org.au

Spring has finally arrived, yet conditions have not improved significantly. Propagation is continuing to decline as we slide to the Sunspot minima. There is little to be heard above 20 MHz. There was a contest at the end of June and the only signs of activity were in the CW portion of the amateur bands. Utility users now appear to be joining the exodus from HF. I also have noted that France has decided to close down their medium wave stations at the end of the year and the longwave station on 162 kHz in 2016. Some German MW senders have also closed down with a complete closure of AM very shortly. German stations abandoned longwave earlier this year although there is a sender broadcasting in

French from a transmitter in Saar. Programming comes from Paris. Radio Luxembourg on 1440 kHz closed down and the LW sender has significantly reduced power and is slated for closure. Norway has gone even further. They are closing FM in favour of DAB+. I have heard from European monitors that they welcome these clear frequencies as it opens up the possibility of hearing real DX from Africa, North and Latin America.

Belgrade did indeed leave shortwave on 31st July, despite protests from employees and listeners. I believe that further cutbacks will happen at the end of October when the A-15 period ends. As mentioned earlier, activity within amateur allocations is thriving. It

makes want to get back operating on the key. I am still experiencing hearing difficulties particularly with speech and music yet I can still read CW. I frequently use online web SDR receivers instead of my Icom or Yaesu receivers. There was a Russian site in the Far East that was highly recommended but alas it was blocked by Cyrillic letters and my geographical location. Politics!

NBN is almost here. Cabling and the outside box has been done and in a few weeks, the inside installation should be complete. I am weighing up various ISP plans and am anticipating the big day. I am not particularly interested in movie streaming or gaming.

Happy monitoring and 73 de VK7RH.



Gold Coast Amateur Radio Society HAMFEST 2015 Saturday 14th November 2015

*Venue: Albert Waterways Community Hall, Corner Hooker
and Sunshine Boulevards, Mermaid Waters.
(Just behind Pacific Fair Shopping Centre)*

- Doors open to the public at 08:30 (Table holders can set up from 07:00).
- Everything is under cover.
- On-site parking.
- Entry only \$7.00 per person or \$10 Family.
- Great Raffle Prizes.
- Further info <http://www.gcars.com.au/hamfest>
- Table bookings please contact hamfest@gcars.com.au

See you there!



Contests

James Fleming VK4TJF
e vk4tjf@wia.org.au

My picks for the month of September are a couple of SSB contests. And a very fun quirky Australian contest. So get your microphones, voice callers and vocal cords warmed up for the All Asian DX contest and the Worked all Europe contest. It should not be too difficult to hit up most of the Asian amateurs as they are fairly close. Europe might be more of a challenge; however they will be looking for that rare Australian multiplier.

This month is the **All Asian DX contest phone** that goes for 48 hours on 5-6th September 2014. The times for the contest are 0000 UTC to 2400 UTC the next day. Bands for the contest are 160 (CW only), 80, 40, 20, 15, and 10 or all except the WARC bands. Entry categories for DX stations are single operator all bands or single band and multi-operator single transmitter or multi-transmitter. Note that there is no entry category for power, thus if your licence permits use 400 watts. Contest call is "CQ AA Contest". The exchange for old man stations is RS and the operator's age, for YL stations it is the RS and the operator's age or if she does not want to give her age the "00". For multi-operator stations the exchange is the RS plus the average age of the operators or the age of the active operator. Points are awarded for contacts with Asian stations, and multipliers are the total number of different Asian prefixes on each band. Working 160 metres will net you 3 points per contact, 80 metres and 10 metres 2 points and all other bands 1 point. Submit your log to aaph@jarl.org in Cabrillo format.

Contest Calendar for September 2015 - November 2015

Month	Date	Starts at	Spans	Name	Mode
September	5th - 6th	0000 UTC	48 hours	All Asian DX contest	SSB
	12th - 13th	0000 UTC	48 hours	Worked All Europe DX contest	SSB
	19th	0000 UTC	24 hours	MWRS Flagpole Contest	All
	19th - 20th	1200 UTC	24 hours	Scandinavian Activity contest	CW
	26th - 27th	0000 UTC	48 hours	CQ WW DX contest	RTTY
October	3th - 4th	0800 UTC	24 hours	Oceania DX contest	SSB
	10th - 11th	0800 UTC	24 hours	Oceania DX contest	CW
	17th - 18th	1500 UTC	24 hours	Worked All Germany contest	CW/SSB
	24th - 25th	0000 UTC	48 hours	CQ WW DX contest	SSB
November	7th - 8th	1200 UTC	24 hours	Ukrainian DX contest	CW/SSB
	14th - 15th	0000 UTC	48 hours	WAE DX contest	RTTY
	14th - 15th	0100 UTC	24 hours	Spring VHF/UHF Field Day	CW/SSB
	28th - 29th	0000 UTC	48 hours	CQ WW DX contest	CW

Rules for most international contests may be found at www.hornucopia.com courtesy of WA7BNM.

The next contest that I will highlight this month is the **Worked all Europe DX contest SSB** that starts on 12th September 0000 UTC and finishes on the 13th at 2359 UTC. Band of operation are all except for the WARC bands. Categories are single op low (100 watts), single op high (100-400 watts), and multi-op, and no power classification. Single operators may only operate 36 out of the 48 hour contest. Thus there is a bit of time to sleep and eat. Off times must be a minimum of 60 minutes. The use of DX spotting nets is allowed in all categories. Exchange is RS plus a progressive serial number starting with 001. Only a QSO with a European station counts for points. Multipliers are the number of countries defined in the WAE country list. For European stations every non-European DXCC entity counts as a multiplier plus in Australia each call area counts

as a multiplier. Country multipliers are weighted by band; multiply the number of countries worked on 80 metres by four, 40 metres by three, and 14/21/28 MHz by two. Additional points can be obtained by a QTC, a report of a contest QSO back to a European station. Submit your log in Cabrillo format to waessb@dxhf.darc.de

The next contest is put on by the Manly Warringah Radio Society; it is the **MWRS Flagpole Contest**. The goal is to set up a portable flagpole antenna. The flagpole station must make up part of the antenna or antenna support. The Contest is all day on 19th September. All amateur frequencies and modes may be used. Exchange will be signal report and a quick report of your flagpole setup. Non-flagpole stations are welcome to participate but will have to work a bit harder to score points. You get one point for making a contact

with a non-flagpole antenna, 2 points for making a contact with your flagpole antenna, 5 points for making contact with another flagpole station, 10 points for a D-STAR contact with a maximum of 100 points, contact with an F call nets you 5 points. Email your photo of your flagpole setup to contest@mwr.org.au and you receive 20 points, send an SSTV image of

your flagpole set up to MWRS on HF 14.314159 for 50 points, flag being flown from your flagpole is 20 points (need photo evidence), and pirate or funny flag being flown from your flagpole 20-100 points judged by the Club President. Calling frequencies are 3670 kHz on 80 metres, 7045 kHz on 40 metres and 2 metre repeater 146.875 MHz. For a log sheet go to: <http://www.mwr.org.au>

[org.au/2013/09/17/mwrs-flagpole-contest/](http://www.mwr.org.au/2013/09/17/mwrs-flagpole-contest/) This contest is meant to be fun and a day contest. I can see amateurs setting up for SOTA, in public, and in national parks while doing this contest.

73, James Fleming VK4TJF



Winter 2015 VHF-UHF Field Day Results

Roger Harrison VK2ZRH

Who's afraid of a big, bad winter, then?

Congratulations to all the section/sub-section winners in each Division, and – once again – to Damien VK5FDEC, the top-scoring Foundation station, who picked

up this spot for Divisions 1 and 2. A particular pat-on-the-back must go to those operators who took the new sub-sections out for a 'run'.

By all reports, the numbers of stations braving the elements at portable locations this winter were

down on previous winters. Notably, 'superstation' VK3ER, with a cast of thousands, decided to call a bye this time. Curiously, a klatch of portable operators handing out numbers did not submit logs. But I note that this is a common

Peter VK4EA set up on Moreton Island (QG62qu). Equipment line-up, from the left: 47, 24, 5/7/10 GHz. On the table are the 3.4-to-10GHz transverters and IC-910H, all GPS-locked with a Trimble Thunderbolt.



feature of previous events. Makes one wonder. You never know your luck when it comes to picking up a certificate – if you enter a log. The grapevine also tells me that a number of operators prominent in previous events were “holidaying” in warmer grid squares. Must be an artefact of climate change!

The comparatively low turnout is readily apparent in the tables on the last page, listing the participating stations who submitted logs for this event, compared with the Winter 2014 and Summer 2015 events. The doomsayers and the clickerati [1] will no doubt attempt all-sorts of prognostications about this.

However, I observe that the number of submitted logs for Winter events has been quite volatile since its introduction in 2008, and submitted log numbers for the 2013 event were also comparatively low, for example. The standout observation in the table of stations who submitted logs for this year’s event is that – once again – the whole field is pretty much having an each-way bet on Division 1 versus Division 2 scoring. I can hear the wringing of hands from here!

Some Wintertime sporadic E gave a fillip to six metres, with contacts between VK4 to VK3 and VK5, along with VK2 to VK4 and VK5.

Change, hell and handbaskets

As this is the first event with the revised categorization of sections and sub-sections, the summary tables set out here are quite different to those presented previously. As you can see, the Four-bands (only) sub-section was enthusiastically taken up by quite a few operators, particularly by those choosing to do 8-hour stints at the rigs, for both portable and home operations. The All-bands category proved as popular as ever.

Four operators took up the digital challenge for its first ‘outing’, being Waldis VK1WJ, Justin VK2CU, Matt VK2DAG and David

VK2JDS – each entering a mix of sub-sections. Thanks guys.

Of particular note is the fact that five Foundation licence operators participated, compared to only three in the Winter 2014 event.

While contacts in the submitted logs revealed that VK2FABV, VK3FMHY, VK5FABG, VK5FCLK and VK5FDEC exchanged contacts with various stations in the event, only VK5FABG and VK5FDEC submitted logs. Good to see Foundation operators from three states getting amongst it. Looking over the Spring 2014 and Summer 2015 events, five F-calls participated in each event, but only from VK3 and VK5. Here’s hoping participation from F-call operators will grow over future events.

No Rovers ventured out this Winter. Well, not quite. One optimistic operator started out fully intending a Rover operation, but it didn’t quite work out that way, what with two locations not working out, then battery power failing, followed by a vehicle breakdown. There’s many a slip ‘twixt the cup and the lip, goes an old expression.

It was heartening to note that seven new operators submitted logs for this event, who had not submitted logs for previous events (unless they perhaps changed callsigns in the meantime).

It seems that the introduction of a two-hour period for repeat contacts was welcome, as operators took advantage of it, judging by the logs. And, better yet, no one complained!

On logs and logging

Since logs only in ASCII text format were accepted from this Winter event, Mike VK3AVV reports much-improved submission of logs this time; only a couple were not generated by VKCL. Accuracy of time reporting showed a big improvement, according to Mike. Very few contacts were logged that were more than 10 minutes apart at each end of a QSO. Most were accurate to better than five minutes.

Nevertheless, there are still some operators who have difficulty in converting local time to UTC; some logs needed correction for this.

Other minor logging anomalies have not changed significantly, says Mike, such as calls or exchanges copied incorrectly, or entering of cross-band contacts (maybe the stations were on the one band, but the log entry was stuffed up). Mike counsels that cross-band contacts in logs are often difficult to resolve if neither station uses the OmniRig utility with VKCL.

Something new

A notable innovation for VHF-UHF contesting has been the Contest Radar website (www.contestradar.com). Before an event, enter your planned portable location (4- or 6-character locator), or your home QTH, along with other salient station details, and the website displays your details on a map – along with the flock of other stations doing the same. You can see at a glance who is where. And the website is integrated with the VKCL logging software.

Contest Radar was pretty busy leading up to, and during, the June contest weekend.

A few statistics

In total, 3149 contacts were recorded, with 1931 checked, or 61%. Ten calls were copied incorrectly; a band was entered incorrectly on nine occasions; and 57 exchanges were copied incorrectly.

Conclusion

Again, thanks are due to Mike Subocz VK3AVV, developer of the free VKCL logging application, and for his work in continuing development of the Field Day log-checking software, and to Michael Binz VK3ALZ and Colin Hutchesson VK5DK for their work in reviewing the results and in helping adjudication of problems with entries.

My apologies for announcing

incorrect start and end times when the Rules were published. No one was penalised for starting 'early' or ending 'late'. Participants carried on as usual, it seems.

These results are also published

on the VHF-UHF Field Days website. Visit www.wia.org.au/members/contests/vhfuhf/

Next Contextst

Spring 2015, Saturday 14 and

Sunday 15 November.

[1] *Clickerati*. n, plural – meaning social media commentators, observers or sages; from *literati*. n, plural – intellectuals who read and comment on literature.

Division 1 – Results Summary

Section A1. Portable station, single op. 24 hrs Four-bands: VK2IO All-bands, digital: VK2CU	Points 417 2123	Section A2. Portable station, single op. 8 hrs Single-band: VK3ZAP Four-bands: VK2VOM All-bands: VK3APW All-bands, digital: VK2DAG	Points 114 192 2516 442
Section B1. Portable station, multi-op. 24 hrs All-bands: VK3KQ	5627	Section B2. Portable station, multi-op. 8 hrs Four-bands: VK2TG All-bands: VK3UHF	402 2894
Section C1. Home station. 24 hrs Four-bands: VK4ALH All-bands: VK3MY All-bands, digital: VK2JDS	976 4101 1006	Section C2. Home station. 8 hrs Single-band: VK3VL Four-bands: VK3CG All-bands: VK3QI Single-band, digital: VK1WJ	138 421 1960 55

Division 2 – Results Summary

Section A1. Portable station, single op. 24 hrs Four-bands: VK2IO	Points 2276	Section A2. Portable station, single op. 8 hrs Four-bands: VK1DA All-bands: VK3HY	Points 3850 13,957
Section B1. Portable station, multi-op. 24 hrs All-bands: VK3KQ	141,234	Section B2. Portable station, multi-op. 8 hrs Four-bands: VK2BOR	3409
Section C1. Home station. 24 hrs Four-bands: VK3PP All-bands: VK3MY	22,555 59,904	Section C2. Home station. 8 hrs Four-band: VK3CG All-bands: VK3QI Single-band, digital: VK1WJ	3929 14253 5301

Top-scoring Foundation station operator: **VK5FDEC. Division 1, C1 298. Division 2, C2 822**

Division 1

Section A1: Portable, Single Operator, 24 hours

Callsign	Name	Location	VHF - UHF Bands					Microwave Bands						All-Bands Total		
			50 MHz	144 MHz	432 MHz	1296 MHz	Total	2.4 GHz	3.4 GHz	5.7 GHz	10 GHz	24 GHz	47 GHz		76 GHz	
VK2IO	Gerard Hill	QF46	47	210	160	–	417									
VK2CU	Justin Lavery DIG.	QF46	29	87	145	232	493	250	260	300	300	–	260	260		2123

Section A2: Portable, Single Operator, 8 hours

Callsign	Name	Location	VHF - UHF Bands					Microwave Bands						All-Bands Total		
			50 MHz	144 MHz	432 MHz	1296 MHz	Total	2.4 GHz	3.4 GHz	5.7 GHz	10 GHz	24 GHz	47 GHz		76 GHz	
VK3ZAP	Jim Wilson	QF22	–	114	–	–	114									
VK2VOM	Martin Bennett	QF55	21	66	105	–	192									
VK5AR	Alan Raftery	PF96	22	69	–	–	91									
VK3APW	Peter Westgarth	QF21	47	189	290	360	886	440	430	430	330	–	–	–		2516
VK3HY	Gavin Brain	QF22	70	360	330	400	1160	220	–	–	430	–	–	–		1810
VK2DAG	Matt Hetherington DIG.	QF46	26	78	130	208	442	230	230	250	240	–	220	220		1832

Section B1: Portable, Multiple Operators, 24 hours

Callsign	Name	Location	VHF - UHF Bands					Microwave Bands							All-Bands Total
			50	144	432	1296	Total	2.4	3.4	5.7	10	24	47	76	
			MHz	MHz	MHz	MHz		GHz	GHz	GHz	GHz	GHz	GHz	GHz	
VK3KQ	Damian Ayers	QF21, QF22	158	1041	1150	848	3197	680	580	580	590	-	-	-	5627

Section B2: Portable, Multiple Operators, 8 hours

Callsign	Name	Location	VHF - UHF Bands					Microwave Bands							All-Bands Total
			50	144	432	1296	Total	2.4	3.4	5.7	10	24	47	76	
			MHz	MHz	MHz	MHz		GHz	GHz	GHz	GHz	GHz	GHz	GHz	
VK2TG	Bob Demkiw	QF56	57	180	165	-	402								
VK3UHF	Lara UHF Mwave Group	QF21	34	237	395	368	1034	470	460	460	470	-	-	-	2894
VK3ALB	Lou Blasco	QF11	48	225	245	328	846	390	360	370	370	-	-	-	2336

VK3KQ: Ralph Parkhurst VK3LL; Mike Ross VK3RZ; Damian Ayers VK3KQ
 VK2TG: Bob Demkiw VK2TG; Dave Ritchings VK2BDR; Ron Griffey VK2NZL
 VK3UHF: VK3PY Chas Gnaccarini, VK3QM David Learmonth
 VK3ALB: Lou Blasco VK3ALB; Jenni Blasco VK3FJEN; Nik Presser VK3BA

Division 1

Section C1: Home Station, 24 hours

Callsign	Name	Location	VHF - UHF Bands					Microwave Bands							All-Bands Total
			50	144	432	1296	Total	2.4	3.4	5.7	10	24	47	76	
			MHz	MHz	MHz	MHz		GHz	GHz	GHz	GHz	GHz	GHz	GHz	
VK4ALH	Leicester Hibbert	QG63	79	165	220	512	976								
VK3BQ	Andrew Scott	QF22	45	222	345	280	892								
VK3SRB	Steven Benz	QF22	22	282	290	-	594								
VK3AUQ	Kevin Phillips	QF22	43	174	235	-	452								
VK5DT	Darren Jury	PF95	37	174	185	-	396								
VK3ND	Greg Smith	QF22	25	99	185	-	309								
VK5FDEC	Damien Clissold	PF95	-	153	145	-	298								
VK3MY	Ross Keogh	QF22	121	696	690	584	2091	550	390	540	530	-	-	-	4101
VK3DLR	David Ryan	QF22	52	183	220	208	663	260	-	-	-	-	-	-	923
VK4CZ	Scott Watson	QG62	-	-	-	480	480	210	-	-	-	-	-	-	690
VK2JDS	David Scott DIG.	QF46	28	84	140	224	476	-	-	270	260	-	-	-	1006

Section C2: Home Station, 24 hours

Callsign	Name	Location	VHF - UHF Bands					Microwave Bands							All-Bands Total
			50	144	432	1296	Total	2.4	3.4	5.7	10	24	47	76	
			MHz	MHz	MHz	MHz		GHz	GHz	GHz	GHz	GHz	GHz	GHz	
VK3VL	David Harms	QF33	-	138	-	-	138								
VK3CG	Gerard Sexton	QF22	39	147	235	-	421								
VK3JL	David Rolfe	QF21	21	177	140	-	338								
VK3PH	Pater Hartfield	QF22	26	108	185	-	319								
VK4LW	Ricky Chilcott	QG62	32	69	105	-	206								
VK2IUW	Hilary Bridel	QF56	21	102	-	-	123								
VK3QI	Peter Forbes	QF22	43	213	290	224	770	360	240	240	350	-	-	-	1960
VK3UX	Glenn Summergreene	QF22	24	69	110	184	387	220	-	-	-	-	-	-	607
VK1WJ	Waldis Jurgens DIG.	QF44	55	-	-	-	55								

Division 2

Section A1: Portable, Single Operator, 24 hours

Callsign	Name	Valid QSOs	Avg. km/QSO	VHF - UHF Bands					Total	Microwave Bands							All-Bands Total
				50 MHz	144 MHz	432 MHz	1296 MHz			2.4 GHz	3.4 GHz	5.7 GHz	10 GHz	24 GHz	47 GHz	76 GHz	
VK2IO	Gerard Hill	19	86	950	1117	209	-	2276									

Section A2: Portable, Single Operator, 8 hours

Callsign	Name	Valid QSOs	Avg. km/QSO	VHF - UHF Bands					Total	Microwave Bands							All-Bands Total
				50 MHz	144 MHz	432 MHz	1296 MHz			2.4 GHz	3.4 GHz	5.7 GHz	10 GHz	24 GHz	47 GHz	76 GHz	
VK1DA	Andrew Davis	22	130	2252	926	672	-	3850									
VK3HY	Gavin Brain	81	84	2956	2398	3209	2193	10,756	781	-	-	2420	-	-	-		13,957

Section B1: Portable, Multiple Operators, 24 hours

Callsign	Name	Valid QSOs	Avg. km/QSO	VHF - UHF Bands					Total	Microwave Bands							All-Bands Total
				50 MHz	144 MHz	432 MHz	1296 MHz			2.4 GHz	3.4 GHz	5.7 GHz	10 GHz	24 GHz	47 GHz	76 GHz	
VK3KQ	Damien Ayers	464	126	14,701	22,010	39,570	20,094	96,375	12,028	9005	10,667	13,159	-	-	-		141,234
VK4EA	Peter Schrader	45	128	2521	875	761	3712	7869	291	-	421	1766	1110	-	-		11,457

Section B2: Portable, Multiple Operators, 8 hours

Callsign	Name	Valid QSOs	Avg. km/QSO	VHF - UHF Bands					Total	Microwave Bands							All-Bands Total
				50 MHz	144 MHz	432 MHz	1296 MHz			2.4 GHz	3.4 GHz	5.7 GHz	10 GHz	24 GHz	47 GHz	76 GHz	
VK2BOR	Oxley Region ARC	11	328	2598	698	113	-	3409									

VK3KQ: Ralph Parkhurst VK3LL; Mike Ross VK3RZ; Damian Ayers VK3KQ

VK4EA: Peter Schrader VK4EA, Jayene Conroy VK4JNC

VK2BOR: A T Monck VK2ATM; Henry Lundell VK2ZHE; Rob Frost VK2CRF; Lyle Smith VK2SML; Craig Martin VK2ZCM

Section C1: Home Station, 24 hours

Callsign	Name	Valid QSOs	Avg. km/QSO	VHF - UHF Bands					Total	Microwave Bands							All-Bands Total
				50 MHz	144 MHz	432 MHz	1296 MHz			2.4 GHz	3.4 GHz	5.7 GHz	10 GHz	24 GHz	47 GHz	76 GHz	
VK3PP	Matthew Gebert	54	453	14,695	7860	-	-	22,555									
VK5AKK	Phil Helbig	13	605	-	4914	8080	-	12,994									
VK4ALH	Leicester Hibbert	42	184	4249	1063	1106	5089	11,507									
VK1KW	Rob Quick	52	96	798	2790	3793	1349	8730									
VK3BQ	Andrew Scott	123	27	1206	1216	2808	1999	7229									
VK2UL	Geoff Rozenberg	56	83	1420	3014	1653	934	7021									
VK3WT	Max Chadwick	94	32	1397	1093	3105	-	5595									
VK3MEG	Steve Barr	38	107	2321	2619	292	-	5232									
VK3AUQ	Kevin Phillips	78	34	1215	996	2689	-	4900									
VK5DT	Darren Jury	42	62	1441	484	1017	-	2942									
VK3OHM	Marc Hillman	33	37	547	493	1253	-	2293									
VK3ND	Greg Smith	23	34	260	418	629	-	1307									
VK5FDEC	Damien Clissold	20	24	-	322	500	-	822									
VK5FABG	John Hayes	12	23	-	149	367	-	516									
VK3MY	Ross Keogh	285	91	7882	9906	9428	6331	33,547	5381	4777	7852	8347	-	-	-		59,904
VK3DLR	David Ryan	69	51	1277	917	1966	1986	6146	2796	-	-	-	-	-	-		8942
VK4IF	Brisbane VHF Group	23	61	-	433	-	2718	3151	-	-	416	1317	-	-	-		4884
VK4CZ	Scott Watson	11	82	-	-	-	3221	3221	180	-	-	-	-	-	-		3401

Section C2: Home Station, 8 hours

Callsign	Name	Valid QSOs	Avg. km/QSO	VHF - UHF Bands					Microwave Bands							All-Bands Total	
				50 MHz	144 MHz	432 MHz	1296 MHz	Total	2.4 GHz	3.4 GHz	5.7 GHz	10 GHz	24 GHz	47 GHz	76 GHz		
VK3CG	Gerard Sexton	79	28	1313	866	1750	–	3929									
VK2IUW	Hilary Bridel	5	297	1200	293	–	–	1493									
VK3QI	Peter Forbes	79	54	1206	1105	1932	1356	5599	2009	1704	2016	2925	–	–	–		14,253
VK3UX	Glenn Summergreene	14	59	261	137	310	810	1518	932	–	–	–	–	–	–		2450
VK1WJ	Waldis Jurgens DIG.	5	771	5301	–	–	–	5301									



Silent Key Ian Hoffman VK3TCX



Ian became Silent Key on Tuesday 23rd June 2015, succumbing to a heart attack that had been some time coming. He had just, in a way only Ian could, snared a large amount of desirable (to us amateurs anyway) equipment that most YLs would say, no way, and suggest its final destination.

Ian was laid to rest on Wednesday 1st July 2015 at the Bruthen Lawn Cemetery.

Peter Larsen VK3FALA remembers Ian:

My earliest knowledge of Ian was in his role as a teenage Sergeant in the Shepparton High School Cadets Signal Corp. He was one of the 'good guys', always cheery and an excellent teacher of us new chums. Never bombastic, he was always honest, fair and reliable.

It was most enjoyable to come across Ian again later in life, again in the context of radio and electronics as I sought to rekindle my interest in the field. It was a pleasant surprise to find Ian sitting at my kitchen table, helping smooth the path into amateur radio and the WIA as mentor and friend.

I appreciated the constant email murmur from Ian with the folk in the East Gippsland Amateur Radio Club and beyond. He had a passion for collecting trivia and tips then ensuring it was forwarded to others who might find it useful.

His enthusiasm for scouring VK Ham and eBay was legendary, which placed him up there with many amateurs. If you needed one of something, Ian had it already or knew roughly where to locate it. A great deal of his engagement was for the wireless community at large.

He was always a good person with whom to test an idea or to introduce you to someone else or a publication that might help out.

SOTA and field day activities have lost some of their sense of fun since Ian's departure.

Ian's passing has left a significant hole in our local amateur radio community.

From the Vice President, Scott Lamshed:

I have been involved with radio for 25 years, through JOTA with VK3ST many, many moons ago and then through a short time working as a radio tech. Two decades later I had the good fortune to meet Ian through our local MakerSpace. Ian was a great mate, always my go-to man for technical advice and a regular for a quick coffee when he passed by our place on his way back to his QTH. I'm still not licensed, though an active member of our club. Ian constantly reminded me that I need to get organised and sit my test. It's hard to imagine we won't see that familiar face popping in to say hello but I'm now committed to getting my VK3 handle and honouring one of the nicest men I have ever met. Cheers and 73 Ian, you are sorely missed.

From Robbie Ashlin VK3EK:

I was one of the lucky ones that were fortunate enough to have met Ian through amateur radio. In doing so, Ian and I both found that we had similar interests. Ian sat completed the course to become an amateur radio Assessor so he could help other potential candidates gain the qualification to become a licenced amateur radio operator. As I am a Learning Facilitator, this meant we had a team to complete assessments, of which we completed many. This also grew our knowledge of both our interest in the hobby. We found we both had an interest in SOTA and teamed up whenever we could to go up to the high country and find a summit to activate. Ian was a person that I found to be very quietly spoken, and there was a reason for that as he was always thinking of what would be the best result for whatever that topic might be. He then would offer his help if needed. The Call sign VK3TCX will be sadly missed... Robbie.

From the Secretary EGARC, Barney Winton VK3XBW:

As an office bearer of the EGARC, I had come to know Ian as man of tenacious capability in either Club matters or any other matter of common interest. His work as President was always appreciated and helped immensely in keeping our technical knowledge at a competent level.

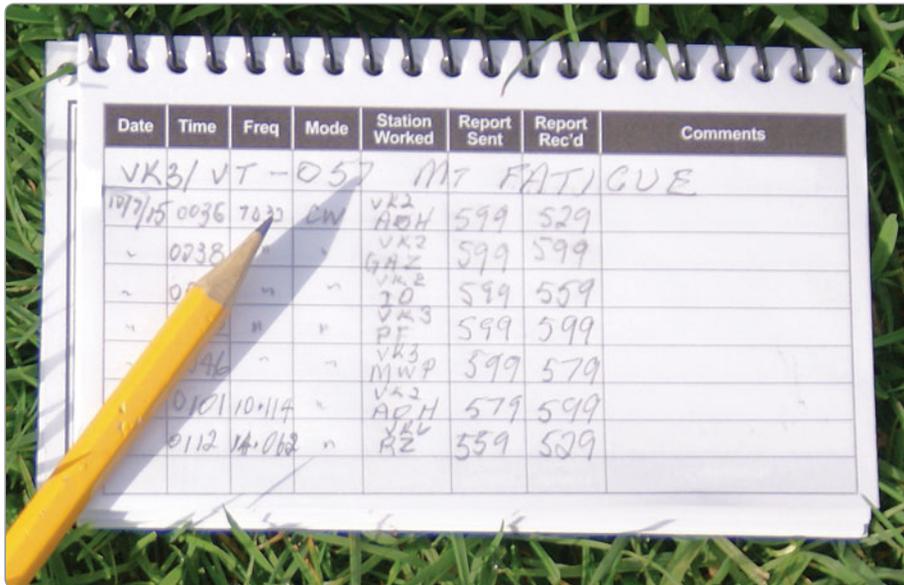
I too will miss Ian and together with all the members of the East Gippsland Amateur Radio Club send our condolences to his wife Gayle on his passing.

Contributed by Barnett Winton VK3XBW.



ROAD TEST: The All Weather Amateur Radio Minilog

Ron Cook VK3AFW



Date	Time	Freq	Mode	Station Worked	Report Sent	Report Rec'd	Comments
VK3/VT-057 MT FATIGUE							
19/7/15	0036	7033	QW	VK2 AOKH	599	529	
-	0238			VK2 GAZ	599	599	
-	05			VK2 30	599	559	
-				VK3 PF	599	599	
-	0946			VK3 MWP	599	579	
-	0101	10.114		VK2 AOKH	579	599	
-	0112	14.012		VK2 RZ	559	529	

The Minilog in action.

The ARRL have produced a Minilog that is water proof. But is it useful and who would need one?

Why

Back pack operation in the parks and hills is becoming increasingly popular, whether for SOTA (Summits on the Air), VKFF (VK Flora and Fauna), a state parks award program or just having fun with radio in the bush. Paper logs are still popular as there are no keying problems or difficulty in reading the text in sunlight as happens with laptop, iPad and smart phones. Inevitably the operator will get caught out by a shower of rain and the paper log will get soggy. The ink might run, pages may stick together and even pencil writing may be hard to read. Certainly writing in the log is impossible if the paper is wet.

What

Well water proof paper has been around for a few years and the

ARRL has seized on an opportunity. They have used this paper to produce a minilog book of 45 pages with nine entries per page. The current ARRL advertisement says 50 pages and eight entries per page so whether mine is an earlier or later print run I don't know.

It measures 130 by 80 mm and is bound with a spiral wire. This enables it to be laid flat and entries made using the book itself to provide the resistance to the writing implement if you are without a table or big flat rock of convenient height.

Not only is it small enough to fit in a pocket, it will float and is very tear resistant.

The waterproof synthetic paper accepts pencil, non-water soluble inks, normal ball point pens and permanent markers. Stains can be wiped off with a damp cloth. Needless to say it takes extreme variations in temperature and humidity without any effect on usability. It is ideal for harsh field

conditions and maritime use. If your vehicle or shack is less than ideal, it can be used there too.

While some conventional ink pens work well on this paper, I found an HB pencil was OK and a 2B pencil gave denser writing but needed more frequent sharpening. I chose pencil rather than ink as it doesn't run when wet and can be erased and the page reused! A pencil will write on the page even when it is wet.

Road Test

So on to the road test. Last year I activated Mt Fatigue and Mt Tassie as bookends to my attendance at GippsTech.

It rained and my log book suffered. I had trouble deciphering the log after I dried it out. This year I again went to these two peaks but this time I was armed with my new water proof Minilog.

My hand writing is normally too big for most boxes on forms and it proved to be the case with the Minilog. Nevertheless I was able to legibly write each contact in the log and the occasional drop of water was shaken off and no harm done. You can actually write under water if need be!

On returning home it was a doddle to transcribe the log onto my computer. Not a trace of it having been wet. The Minilog will be my companion on all future SOTA activations.

The current ARRL price is US\$8.95. I bought mine at the Moorabbin and District Radio Club Hamfest for AUD\$10.00 - a bargain - from Pages of Cobram (www.radiobooks.com.au)



Over to you

OTY Re: Contest behaviour

The Editor,
Amateur Radio

I read with interest the OTY item by Lou VK5EEE. At first I put it into the category best described by Oscar Wilde, "I always pass on good advice it is so very rarely of use to oneself". However, Lou claimed some expertise in this area and I fear that readers may be misled by his opinions. Now Lou is entitled to his opinions but he is not entitled to state or imply that people who do not follow his views are acting immorally or illegally!

First his comment about 59(9). As far as I am concerned in a major contest the report is just to let me know that the next bit is important – a serial number, zone or whatever. The reasons for that are many:

1. When I am running stations at between one and four contacts a minute while tuning on other bands to check conditions and ensuring my current contact gets into the computer log correctly gives enough for my eye and brain to do.
2. During a contest there is a lot of QRM. Most good operators will be riding the RF Gain control to read through the noise. On most transceivers this invalidates the S meter or makes it difficult to read without turning the gain back up.
3. The QRM levels are often such that when receiving on a big beam anything less than a 9 signal will probably not be heard. In fact even with the RF gain up it is likely that what appears on the meter is noise and cross mod not the signal being received.
4. Many times I have had the situation where a signal is perfect then I have to ask for repeats. A lovely example occurred a few years ago on SSB in a major contest. I was running stations on long path to the USA. For more than five minutes I had heard a low level station under the pile calling but could never get enough of the call to get him. Then suddenly there were no other

callers and the overall QRM dipped. He had a lovely signal and I got him in one call. Definitely Q5! Gave a report. Then it took about six repeats to get his report to me. The QRM was back with a vengeance. He contacted me later by email, he was ecstatic as he was only running 1 watt!

5. Why could I not tell that he was weaker. The RF gain was obscuring S meter. Further, modern AGC is so good that all signals "sound" the same. You can make them rise with incoming signal using menu changes but I prefer a flat AGC.

6. If you really want an "honest" report then get me outside a contest and I'll plug in the switched attenuator calibrate to dBm and give you something meaningful.

7. There is nothing to stop anyone giving any report they want in a contest. However, to imply that those like me who do not do so are "not in the spirit of ham radio" or "not even in the basic realms of honesty and decency", is just insulting exaggeration that reflects more on Lou than those of us who operate in our way.

Finally some contests do leave out the 59 bit. Personally I don't like it as the report helps my ears to "tune in" for the exchange.

His other comments are based in two common fallacies:

1. The recommendations for use of a particular frequency are just that. They are not a rule that ONLY that type of use can occur on that frequency. In normal times operators will allow for QRP, AM or whatever but there is no right or entitlement to your frequency. The basic rule of amateur radio frequency occupancy is first in, best dressed, tempered by various considerations when possible. When the bands are very busy then ANY unoccupied frequency is available.
2. No individual amateur has a right to a frequency when they want to get on the air. It is simply impossible. There are too many of us. Just do some simple math. Divide the band

by 2.5 kHz for SSB or 300 Hz for CW and see how many can get on at the same time. (Even then Lou would waste valuable frequency space by demanding 4 kHz for a QRP CW channel.)

The point made about IARU emergency frequencies is simply rubbish. When there are real emergencies the frequencies being used are advertised and good operators, even in contests, leave them free. My experience has been that frequencies used in emergencies are rarely in line with the IARU recommendations. To ban operating on 14280 to 14320 would deprive US general class hams of most of their available band on twenty. Obviously not what the IARU recommendation intended.

Lou should also discover how many contest type operators can indeed be on in emergencies with both battery and generator power. As a keen operator I have always had battery and generator power so that I am not off air in a contest due to mains drop out.

There are 3 or 4 CW and 3 or 4 SSB weekends a year when activity peaks as a result of contests. I am sorry that Lou and people like him are inconvenienced and not able to do their thing just when they want. However, I will not have them making rules to ensure they can be on the air whenever they want at the expense of the many thousands of hams who enjoy an active on air experience during contests.

Contests just make more hams active. Those Amateurs are just as entitled to their use of a frequency as is Lou and the others that seem to believe they should take precedence over everyone else. Radio is a multi-faceted hobby. Note the major contest days and choose then to do some home brew, repair the antennas, operate a different mode, do some VHF or whatever you fancy. Just stop the complaining and insults, then get on with life.

Martin Luther VK7GN (ex - VK5GN, VK4VU, GW3VBX, G3VBX).





VHF/UHF - An Expanding World

David Smith VK3HZ
e vk3hz@wia.org.au

Weak Signal

There's not a great deal to report this month. I'd guess that the cold snap across the south of the country probably has a bit to do with that with most people staying inside huddled around the fire (or heating source of their preference) rather than venturing out to the icy confines of the shack. Melbourne has reportedly had the coldest July for 20 years.

Hobart (as it does) has been even colder, experiencing its heaviest snowfall for many years with snow right down to the water's edge. Rex VK7MO awoke to about 10 cm of snow, some of it beautifully balanced on the elements of his 2 m Yagi array (see photo).

Anyway, enough of the weather; it's starting to sound like 80 m.

3.4 GHz Band

The new / interim / re-made LCD has been released by the ACMA and has made official the changes to our access to sections of the 9 cm band. Of relevance to weak-signal operators, the block from 3400 MHz to 3425 MHz is to be withdrawn from amateur use in a number of geographic areas surrounding most mainland capital cities - Adelaide, Brisbane, Canberra, Sydney, Melbourne and Perth. Interestingly, Hobart and Darwin are unaffected. The restrictions will only come into force when (if) licences are issued to the NBN for fixed wireless services in metro fringe and hard to service areas of these cities.

So, why don't we just continue to use 3400 MHz until our area is affected? The problem is that as soon as any area is restricted,



Photo 1: Snow at the VK7MO QTH.

operators in that area will have to move frequency and we'll end up with a split of operations. While there are only a relatively small number of active stations on 9 cm (dogpiles there aren't!), that number is expected to grow significantly with the ready availability of ex-3.5 GHz radio link units that can be readily converted (contact the GARC for more information). So, it is probably better if we move frequency en-masse, now, to avoid this sort of confusion.

So where are we moving to? Until NBN is actually running, we have no idea of the sort of interference that may occur - 3395 MHz was mentioned. Now the Band Plan has been updated and a frequency of 3398 MHz has been listed. This probably makes a lot of sense in the short term as it is within tuning range of most IF radios

without any need to change LO frequency or retune the transverter or antenna. If we do find that there is significant interference from NBN, then we can always move down further.

With a touch of irony, rumour is that the NZART are planning to move their 1 MHz weak-signal segment from 3399 MHz to 3400 MHz. Whether this is to align with VK (as it was) or to conform to international convention (as we should) is not clear.

6 m Band

Long-time readers will recall that there was a 6 m "Magic Band" section within the VHF/UHF Column for many years. Unfortunately, the various authors of this section were unable to continue with it and, with nobody stepping in to take over, it fell by the wayside. So, again I ask,

if anyone would like to compile a section with 6 m news, then please contact me.

Meanwhile, Richie VK8RR reports that on July 5th, he made 24 SSB contacts on 6 m into Europe. The areas worked were SV, IW, IK, TA, 9H, J4 and also heard OZ. On June 24th, he heard LZ1QI, IK0FTA and YU6MM.

Please send any Weak Signal reports to David VK3HZ at vk3hz@wia.org.au

Meteor Scatter

Dr Kevin Johnston VK4UH

Well at long last the error light on the 10 MHz shack GPSDO has gone out! The "Thunderbolt" based system had been warning of the impending leap-second for many months.

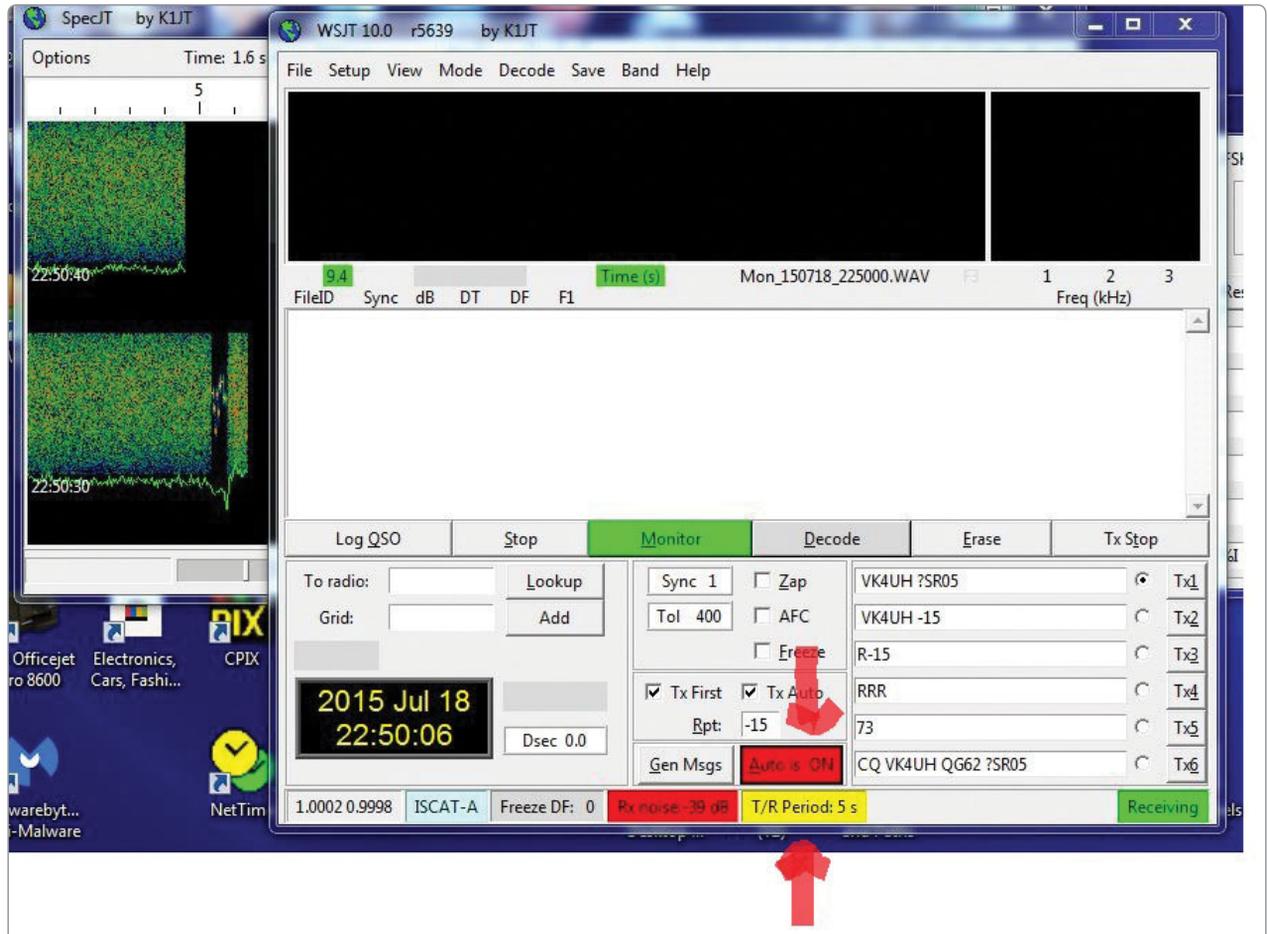
Last month I reported on attempts by Scott VK4CZ and Bob ZL1RS to complete 50 MHz MS QSOs. This month Scott has provided the following report:

VK/ZL 6 m FSK meteor scatter trails

The fun of working meteor scatter on 6 m has produced some good contacts over the years. The now regular morning Meteor Scatter contacts that Brad VK2QO was instrumental in fostering on 50.2 MHz has enabled regular contacts to be made. And from here in QG62lp the 'ever reliable' 1,720 km path to Frank VK7DX, and up to 1,795 km when Glenn VK7AB was active, seemed to be the available limit due to activity levels and station locations in VK. The challenge of extending a 6 m MS contact to over 2,000 km would

require thinking a little differently. This raised my interest in trying to complete the path between VK4 and ZL via Meteor Scatter on 6 m and had been growing in appeal for a while. However, I needed someone at the other end of the path. With growing interest in the domestic VK 6 m MS activity and in particular the increased level of activity now observed most weekends on 6 m FSK, and with ample encouragement from Kevin VK4UH, it was finally time to use that momentum and generate interest in seeing if ZLs would join in the challenge. Kevin VK4UH kicked things off and started a thread on the VKLogger Forum. Supporting that, a few emails were sent to a few ZL stations that had a keen interest in 6 m, had known to operate digital modes and had capable stations. The process had started.

Figure 1: 50 MHz MS signals received by ZL1RS (July 18 2015).



Warily Mark ZL2WHO responded and with a little arm-twisting, offered to run the first sked. The first activity commenced on Sunday June 28 at 1930Z (07:30 am ZL, 05:30 am VK) on 50.230 MHz FSK running for 60 minutes. Liaison conducted via the VKLogger 6 m iChat facility. In keeping with convention, the ZLs making the northbound and westbound transmissions were to operate in first period and VK4 making the southbound and eastbound transmissions were in second period. On June 28, not only was Mark ZL2WHO operating, but Bob ZL1RS surprised us and was supporting with Rx only capability (due to a feedline issue at the time). This first attempt didn't result in anything being seen here in VK4, but Bob ZL1RS reported decodes of my CQs. A great start, raising my interest more and immediately proved that the path was going to be possible! On Saturday July 11 and July 12 the skeds produced limited decodes, but nothing allowing the contacts to progress. The sked on Sunday July 19 provided the best results so far. Decodes between VK4CZ and ZL1RS were achieved enabling progression to the next logical report to be sent. We patiently persisted for the full hour but unfortunately, we were unable to

complete on that occasion. Now with three weekends of operating behind us, we're gaining more interest and seeing a growing number of ZLs joining in – with Bob ZL1RS, Mark ZL2WHO, Chris ZL2DX, Peter ZL4LV, Rod ZL3NW and Roger ZL3RC all participating at various times. The results to date have been produced on purely random meteors. I anticipate that with the assistance of a meteor shower we will complete this path very soon. And with the Southern delta-Aquarids set to peak on July 28, the weekend of July 25 and 26 will be our best chance yet. For VKs and ZLs wishing to participate, please follow and join in on the VKLogger Forum thread entitled 'VK4 to ZL 6 m M/S skeds' and announce your activity on the VKLogger 6 m iChat.

At the GippsTech meeting in VK3 in July, Rex VK7MO gave a comprehensive presentation on recent updates and the future of the WSJT software suite from K1JT. Although most of the recent developments have been aimed around subtle improvements in the software to optimise the decoding of aircraft rather than meteor scatter on the higher microwave bands, there have been some new options which may be of interest to the MS community. Currently,

a pre-beta version (my words) is available (WSJT V. 10.0 Rev 5639) under test. This latest version has two new features in the ISCAT modes. Bearing in mind that ISCAT was originally intended for Meteor Scatter operation on 6 m, although it is currently being reincarnated for Microwave Aircraft Scatter where the recovered signals have many characteristics similar to meteor pings.

The first of these features is the inclusion of 10 and 5 second periods in the timing options in addition to the normal 30 and 15 second periods. These can be selected by clicking on the T/R period box in the bottom menu bar of the main WSJT screen.

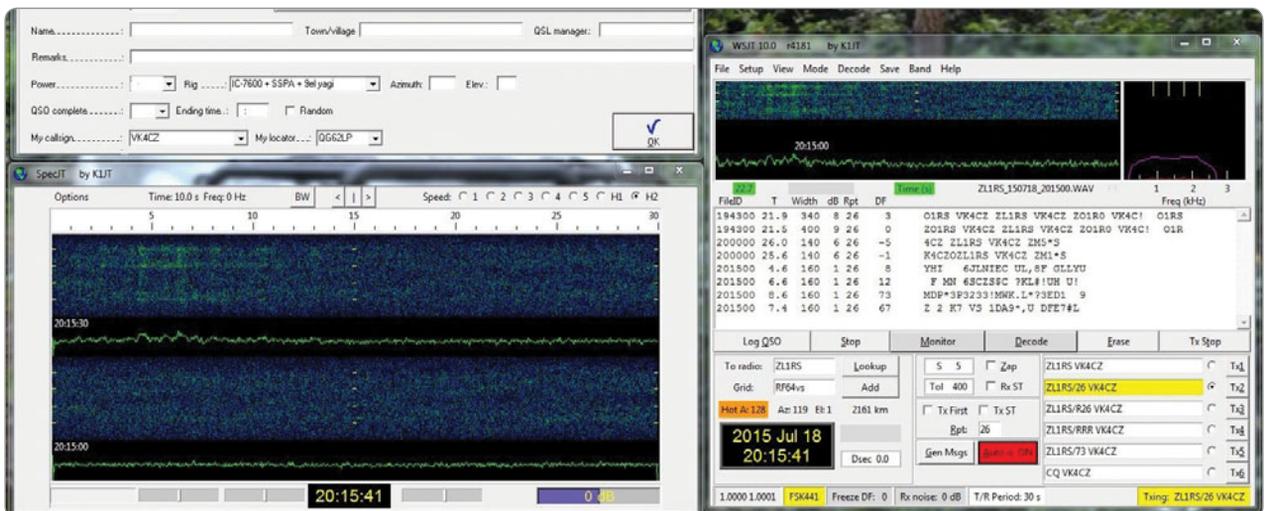
Shorter periods allow completion during very short periods of signal returns.

See Figure 2.

The standard messages in Tx6 (CQ) and TX1 (CALL) is annotated: "?SR05" or "?SR10" to indicate which time period is being transmitted.

The second feature is a new "Auto-QSO" mode. When activated this allows the automatic increment of the QSO stages through Tx1 to Tx6 as the previous report is correctly decoded. Once "73" is received in both directions then the system reverts to stand by. If unanswered there is also a time-

Figure 2: GUI from WSJT 10.0 R5639. Red arrows indicating the "T/R period" box and the new "Auto QSO" mode.



out feature included to prevent continuous transmission.

“Auto-Increment” or “Auto-QSO” is included in the PSK2K meteor scatter package, as described in previous articles. PSK2K does not seem to have many enthusiasts in VK-ZL, however It is very widely used by “ping-jockeys” in Europe.

The new revision R5639 is not available as a formal release on

the K1JT site at this time. A search will find links to it on Google Drive (WSJT_SS_ISCAT@yahoo.com). A number of tests have been made by VK4UH and VK4MIL direct on 2 m to try out this Auto-QSO feature. It certainly works but is not quite what I would describe as “intuitive”. It requires a bit of practice to get it to run as intended – but certainly worth a look.

The next Major Meteor showers for the diary will be the Perseids around 13th August with a predicted ZHR of up to 100/hr.

Please send any reports, questions or enquiries about Meteor Scatter in general or the digital modes used to Kevin VK4UH at vk4uh@wia.org.au



WWII Tidbits

SHOOTING DOWN THE WIA QSL BUREAU?

Our first news this month concerns VK3RJ, and when I get my job with the big evening newspaper, I'll report it like this:

DASTARDLEY AND UNPROVOKED ATTACK ON FEDERAL QSL BUREAU

.... VALUABLE WIA OFFICER LOOSES SLEEP....

“From our Special Correspondent at an Eastern Capital we learn that one night recently a passing “visitor” fired a dozen or more shots of 6 inch [150 mm] calibre at our sleeping QSL Officer, etc. etc...”

What's so important about that you want to know? well, THEY MISSED ... sitting shot and all And their best was 150 yards off and me wanting to be Federal QSL Officer ... wouldn't it ?????

And now he sleeps “under” the bed, so I hear on unconfirmed authority – As he only woke up to hear the last shot, it might be right. Hi!

[AR, July 1942, p5 Slough Hats and Forage Caps by Jim VK2YC]

WWII Tidbits

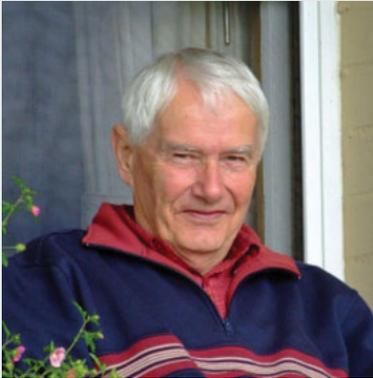
VK6 CIVIL DEFENCE SCHEME

A scheme has been put forward for the use of radio in the event of communication breakdown, and after months of negotiation it is only awaiting final approval by the P.M.G.s Department. A committee comprising of George Moss VK6GM, Cliff Brown VK6CB and Chas. Quin VK6CX has been appointed by the Civil Defence Council. They will be calling shortly for assistance in this project from other Members.

[AR November 1942, p14 Slough Hats and Forage Caps by Jim VK2YC]

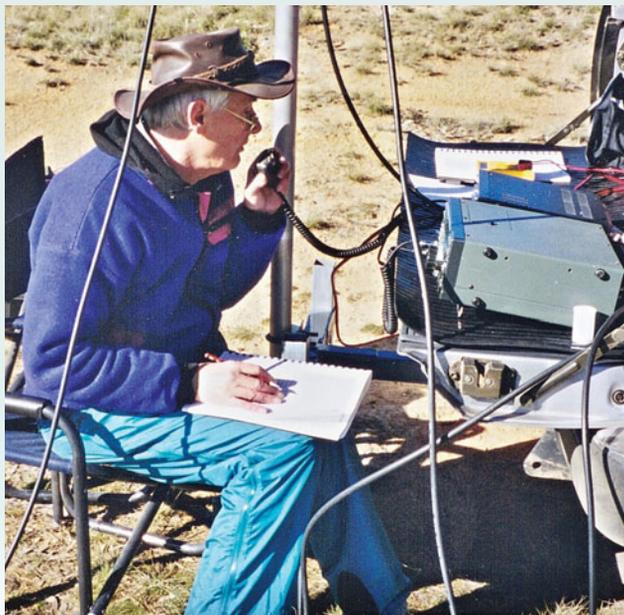
Silent Key

Guy Fletcher VK2KU



It is my sad task to report the untimely passing of Dr Guy Fletcher VK2KU on 27th March 2015 in his 77th year after a four year battle with cancer. Guy was a distinguished, much liked, and much admired member of the Australian and international VHF/UHF weak signal and EME amateur radio community.

He was born on June 3rd 1938 in Kent UK. His lifelong interest in radio began whilst at the King's School in Canterbury, and after beginning as a keen short wave listener, obtained his amateur licence aged 18 in 1956. His early aptitude for mathematics and physics resulted in a scholarship to Corpus Christi College



Cambridge, where he graduated with honours in those subjects in 1961.

After graduation he taught at Canford, a leading English public school in Dorset, and then in 1967 moved to Australia to become a founding member of the academic staff of Macquarie University in Sydney, which opened in that same year. He completed his PhD in 1975, and remained at Macquarie until he retired in 1997 as a Senior Lecturer in Physics 30 years later. Guy enjoyed an outstanding reputation as a university teacher and researcher amongst staff and students alike, and is remembered by all as someone always willing to share what he knew. He displayed these same generous qualities as member of the amateur radio fraternity, but was never one to promote himself or put down others who were not quite at his technical level.

From this background, Guy was able to bring a rare marriage of theoretical and practical expertise at the highest possible level to his passion for amateur radio and, after retirement, to the pursuit of weak signal VHF and UHF activity in particular. His station was meticulously engineered; from his excellent home brew antennas based on the best available modelling software (including his own unique contribution to the accurate calculation of Yagi boom corrections), to his low noise preamps, and tube linears. Indeed, it would be hard to imagine a more organised and disciplined practitioner. His interests in this period first centred around propagation enhancement

and adding to his grid square tally, but he was quick to embrace digital modes and software defined radio as these technologies emerged after the start of the new century. This led him to keen interest in EME using both CW and digital modes which then became his major focus, and was a major factor in moving his QTH in 2004 to an electrically quiet acreage in the NSW Southern Tablelands, where he was constantly busy extending his impressive antenna farm until illness finally overtook him. It is a testament to the quality of his station, and his skill as an operator, that in 2011 he received the first ever 2 m EME DXCC certificate from the WIA; an outstanding and pioneering achievement. He also maintained a valued website as a resource for VHF & UHF weak signal activities, published the well-known grid square league table, and was a keen participant in the GippsTech Conferences.

Beyond amateur radio, Guy was a man of wide ranging interests in his busy life. He had a love for classical music that began at school, and a formidable knowledge of opera, especially Wagner. He was a keen bushwalker who led many expeditions, especially in the Blue Mountains of NSW, an abseiler, an expert yachtsman, a conservationist, and in his younger days, an excellent tennis player.

Most importantly of all, Guy enjoyed a deep, loving and wonderfully supportive relationship with his XYL Catherine, and they happily shared many interests in common. She was utterly unstinting in providing him with all the care that was humanly possible during his illness, and he died cradled in her arms in March of this year, just two days before their 35th wedding anniversary. He also leaves behind him a son, a daughter, and six grandchildren.

We will greatly miss his extensive contributions to our hobby, his gentle courtesy and unfailing good humour, but above all, his friendship.

Prof. John Clark VK2TK



SOTA News

Allen Harvie VK3HRA

Park Activations

The enthusiastic activity based around park activations is outstripping demand. Despite the winter weather and poor band conditions, 40 activators completed 83 activations over 61 distinct WWFF parks during July.

There are an increasing number of keen activators of all licence classes and experience embracing the portable activations. Those who activated more than two parks included Chris VK2YY activating seven, Arthur VK4FE five, Brett VK4FTWO four, Rob VK4FFAB three and Johnno VK3FMPB activating three.

To address the demand, the VKFF co-ordinator Paul VK5PAS has added an additional 75 parks this month bring the total available up to 941 entries. The new entries existed in the SANPCP scheme. The WWFF scheme has brought our VK activators to the attention of the rest of the world.

July also saw members of Amateur Radio Experimenters Group (AREG) activating a special event station VI5MCP. This was to celebrate the 100 years of Proclamation of the Morialta Falls Pleasure Resort, which we now know as Morialta Conservation Park. Activations of this park

qualified for both the WWFF (VKFF-783) as well as the SANPCPA schemes.

For more award information go to:

<http://www.wfffaustralia.com/> or <https://au.groups.yahoo.com/neo/groups/wfffaustralia/>

For current park activity: <http://parksnpeaks.org/>

SOTA News

SOTA is as busy as ever. With the poor start to the snow season, several activators who were intending to activate high-end Alpine summits (with seasonal bonuses up for grabs) ended up

David VK3IL and Paul VK3HN on The Hump VK3/VE-019 in the Mount Buffalo National Park VKFF-339.



hiking instead of skiing, never the less still out. Weather and band conditions turned towards the end of the month to bring the winter experience home.

Several VK operators incorporated family holidays with the SOTA activations and headed overseas. John VK6NU headed to Ireland picking up five Activations from three different summits (EI/IN-067 Knoacnarea, EI/IE-054 Mohercrom and EI/IS-050 Torc Mountain) in three Associations.

Tony VK3CAT headed to Canada to activate (Burnaby Mountain VE7/GV-009, Dufferin Hill VE7/TN-022, Whistler Peak VE6/EC-001 and Tunnel Mountain VE6/HC-035): four summits across four associations and a couple of coffee shops.

In VK1 and VK2 in the last month the main activity has been by Phil VK2JDL, Gerard VK2IO, Andrew VK1NAM, Al VK1RX, Andrew VK1MBE, Ian VK1DI and Andrew VK1DA, some of it focussed around the 10 m/6 m challenge. By far the majority of qualifying contacts made have been on 10 m. In June there was still some morning propagation into the US on 10 m and some activators enjoyed some good openings. Al VK1RX built a portable 2 element Yagi for 10 m and used it on at least one summit. He also built a quad for 6 m and used that on several summits.

The number of unique stations worked is low for VK operators as there are not very many local operators and they rely on openings to North America or Japan to build the numbers. With JA now live on SOTA it will be interesting to see how many JA operators become chasers and activators.

The mid-winter VHF/UHF field day in June sparked some activity on SOTA summits with VK2IO and VK1DA making several contacts on VHF/UHF bands. Overall winter activity was at its typical low level.

Andrew VK1DA travelled northwards in late June and activated Mt Canobolas VK2/CT-001 and Mt Kaputar VK2/NW-001 en route to Brisbane. There are plenty more summits yet to be activated in those areas.

Given the conditions, the level of activity is surprising with several summits receiving high attention.

Whilst David VK3IL was walking up the track to The Hump VK3/VE-019, he came across a man and his son walking down. They were carrying a squid pole. The Hump is not known for its fishing so David quickly asked the question had to asked as to whether they had had just done a SOTA activation: Yes, it was Paul VK3HN. Both parties reported it was great to put a face to a call sign especially in the SOTA activators natural environment.

During his activation of Bakers Downfall Hill VK2/NW-006, Matt VK2DAG found a pair glasses. They were on the top of the summit on an ideal operating position. Four days earlier Phil VK2JDL had activated the summit losing his glasses. It didn't take long to determine the owner and to organise the return of the wayward glasses.

Upcoming events – Place these dates into your diary:

Summits and Parks event – 24-25th October 2015

There will be a seminar covering aspects of portable activities to be

held in Wagga Wagga NSW on the 24 & 25 of October. The intent is to provide a forum for the sharing of experiences and to encourage participation in this exciting and dynamic aspect of our hobby.

Date: 24/25 October 2015

Venue: Wagga Wagga Amateur Radio Club

Open to all interested parties. Topics will be broad to address aspects of portable activities.

Current topics include:

- Contact Logging
- Successful SOTA DX
- Antennas beyond the dipole
- CW Activation's for fun and profit
- Mapping Tools

Followed with discussions and a meal Saturday evening.

Sunday you will be able to deploy your new skills with planned SOTA and WWFF activations in the local hills. New or experienced, young or old, all you need is an interest in operating portable. All are welcome.

For more details contact - seminar2015@parksnpeaks.org

Two activation weekends coming up with expected improved conditions for what is always a popular event. Locate your closest park then head out for:

KRMNPA Weekend - November 13-16th 2015:

<https://au.groups.yahoo.com/neo/groups/krmnpa/info>

WWFF Weekend – November 28-29th 2015:

<https://au.groups.yahoo.com/neo/groups/wwffaustralia/info>



The WIA serves and protects

Want to know what the WIA is doing so amateur radio can be encouraged, and its members are engaged?
Wish to be informed on the latest developments that may affect you?

Then regularly visit the material on its website, read the WIA journal Amateur Radio magazine, and listen to the weekly VK1WIA broadcast.

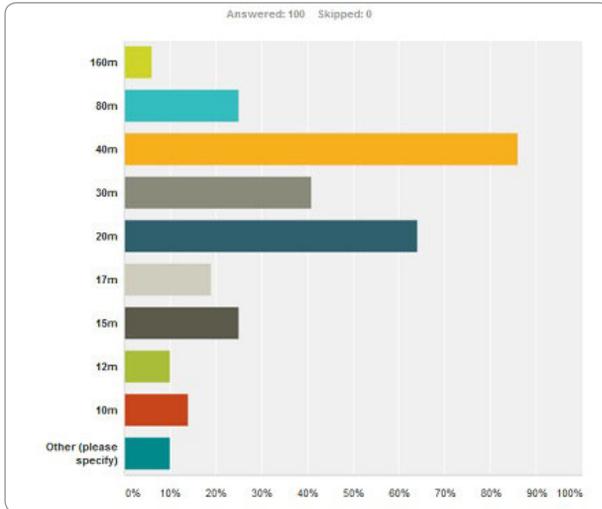
The WIA website, which includes the text edition of the broadcast, is at www.wia.org.au

VK CW Survey

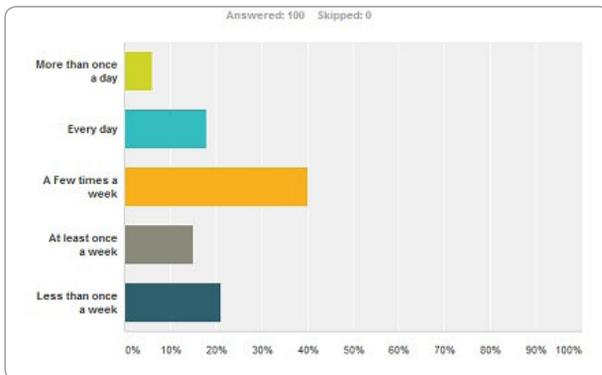
Lou Szondy VK5EEE

A survey was conducted with questions being answered by 100 of the most active CW operators in VK during the past 2 months. Individual responses were anonymous, results were as follows:

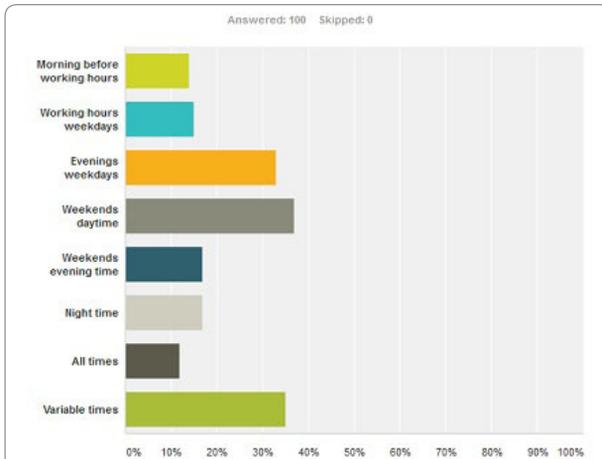
1. Which band(s) are you (mostly) active in CW?



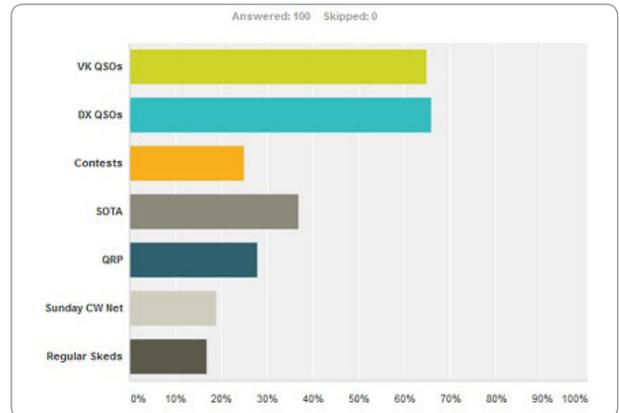
2. How often are you generally active on CW?



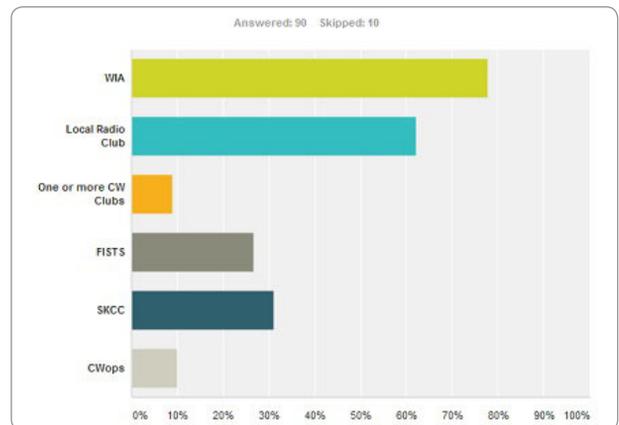
3. What are your usual operating time(s)?



4. Which of these CW activities do you generally participate in? (Tick as many as you like)



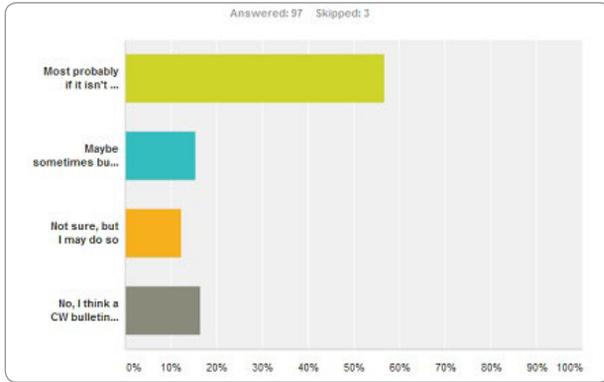
5. Are you a member of any of these clubs?



6. If a VK CW bulletin was broadcast in CW on air at 18WPM, would you tune in?

Answer Choices	Responses
Most probably if it isn't too long, and is interesting	56.70% 55
Maybe sometimes but I'm not that interested	15.46% 15
Not sure, but I may do so	12.37% 12
No, I think a CW bulletin wouldn't interest me	16.49% 16
Total Respondents: 97	

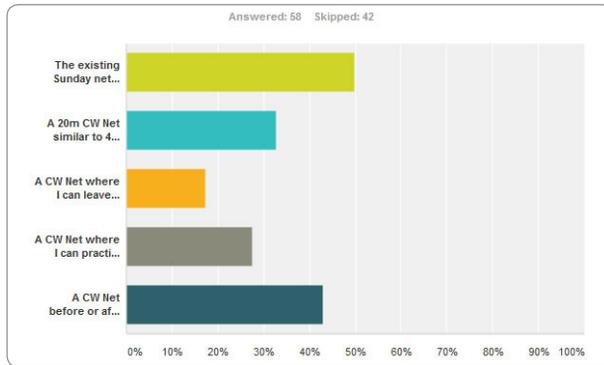
Already the survey has created a lot of renewed interest in CW activities, with the Sunday morning CW Net which on August 2nd had its 2,173rd session and is still going strong after 43 years, having record check in numbers lately. The CW Net runs from 10 am to Noon EST on 7.025 MHz on 40 m.



7. What type of CW Nets would you be interested in checking into?

Answer Choices	Responses
The existing Sunday net 10am-11am on 40m and paired off by net control for QSOs	50.00% 29
A 20m CW Net similar to 40m CW Net (starting an hour later)	32.76% 19
A CW Net where I can leave messages/pick up messages from ham CW friends	17.24% 10
A CW Net where I can practice short message sending/receiveing (EMcoms)	27.59% 16
A CW Net before or after a CW Bulletin to exchange reports	43.10% 25

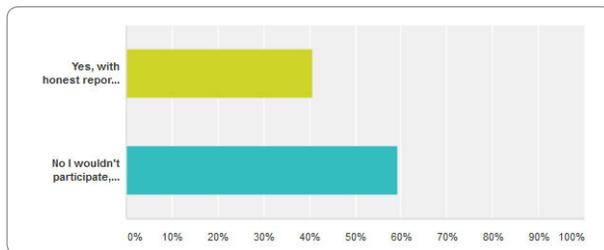
Total Respondents: 58



8. Would a weekday “CW Bash” activity period of one hour be of interest to participate in?

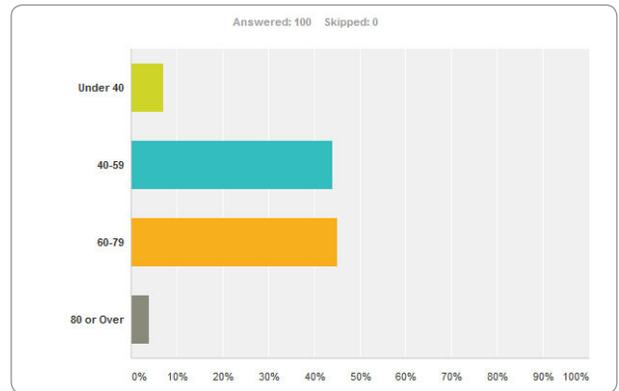
Answer Choices	Responses
Yes, with honest reports, name, serial number, choice of any of three one hour periods on different days/times	40.70% 35
No I wouldn't participate, I find enough activity for me on the band(s)	59.30% 51

Total: 86

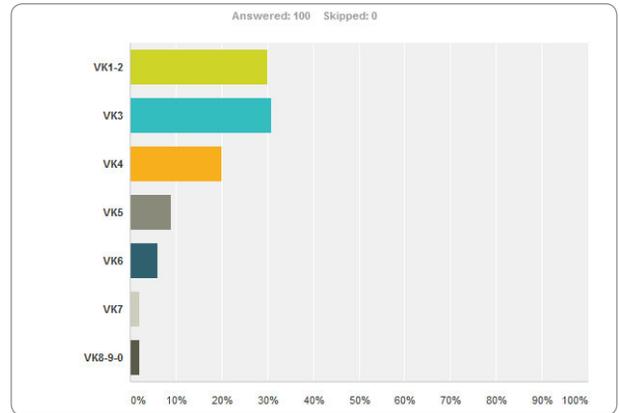


As a result of the survey a “CW Bash” is being planned for each weekday night at 8 pm EST for 30 minutes, though people can continue longer if they wish.

9. What is your age?



10. What state are you in?



There are little or no rules other than the following at time of going to press:

- Monday and Friday nights are 160 m CW
- Tuesday and Thursday nights are 40 m CW
- Wednesday nights are 80 m CW.

Simply call CQ and have usual QSO if you wish, or call CQB if you wish to have rapid QSO with only an honest RST exchange being required, and optionally name, and post code.

Scores are based on honours system and will be able to be posted online by participants at the end of any evening of participation. Latest rules or any changes to times and bands will be published on a website at VKCW.net

It is hoped that the “CW Bash” activity will be a fun activity that will be welcome to many newcomers to this mode and not require higher speeds or QSO skills, with it being enough to exchange callsign and an honest signal report, if calling or responding to “CQB”.

Lou VK5EEE (vk5eee@wia.org.au) who conducted the survey, plans to compile a CW page in *Amateur Radio* magazine from the October issue forward and is soliciting any news for publication.



Hamads

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volt \$75.

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American Electronics Power
SWR model 95-135 \$50.

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element 10,15,20 Meter Beam Antenna
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(02) 44735557 Kevin Stannard VK2II
QTHR

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(08) 8346 7042 Or email vk_5mx@dodo.com.au QTHR In Call book.

Silent Key Lyle Albert Dobbs VK4LM



Lyle Albert Dobbs was born on July 1 1940 in Rockhampton to proud parents Albert Charles Dobbs and Elvira Gwendoline Dobbs. Sister Lynette completed their family. Lyle attended school in Rockhampton and left school at 14 years to support his mother and sister after his dad passed away and he obtained an apprenticeship with McLeod Electrical.

The foreman at McLeods was Vince Bell VK4VD. Lyle joined the Central Queensland Branch of the WIA in 1964. In 1969 Lyle left McLeods to work at the CREB (now

known as Ergon) as a communications Technician with Charles Morris VK4MT.

Lyle met Margaret Marion Edwards in 1957 at the Salvation Army Harvest Festival. They married 31 December 1960 at St Andrews. Their marriage was blessed with three children; Janelle Margaret, Ross Lyle and Tresna Leanne.

Lyle believed in family and welcomed Lynn and Jim as his own children. Family was further blessed with grandchildren: Naomi and Joel, Megan and Paulo and Andre and

Seanna. Lyle's sister Lynette with Trevor and their family were prominent in his life.

Lyle was an amateur for more than 50 years. His first call sign was VK4ZLD followed by VK4ALD and finally VK4LM. Lyle has many lifelong friends through amateur radio.

Lyle was a founding member of the Rockhampton State Emergency Service in 1975 and celebrated 40 years of service this year. He dedicated a large portion of his life to assisting the community and was always a humble man in his service to others.

Brass bands and music was another of his interests. He played in the Salvation Army Band since he was a teenager playing cornet and trombone and also played with the Rockhampton City Band since 2001.

Lyle worshipped at the Salvation Army and continued to serve the community with his involvement in the Salvation Army Emergency Services.

Lyle was a man of integrity, honesty and character. His influence goes on through all the lives that he has touched.

Vale VK4LM "Silent Key"

Provided by Ray Dobinson (CQARA)



Plan ahead

Spring VHF/UHF Field Day November 14 - 15 November



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.

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Radio Amateurs Old Timers Club Australia

Or if you have been licensed for less than 25 but more than ten years, you are invited to become an Associate Member of the RAOTC.

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Ian Godsil 046 628 6003

or Bill VK3BR on 03 9584 9512,
email raotc@raotc.org.au
for an application form.

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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.

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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 call sign 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)

Geoff VK3AFA, Phil VK2ASD (Director), Peter VK3MV, Roger VK2ZRH (Director), Brian VK3MI, Dale VK1DSH, Peter VK3APO, Richard VK2AAH, Gilbert VK1GH, Rob VK1KRM, Noel VK3NH, Doug VK3UM

- 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.)

John VK3KM, Doug VK3UM, Rex VK7MO, Paul VK5BX, Walter VK6KZ, Barry VK2AAB, Bill VK4XZ, Peter VK3PF, Paul VK2TXT, Peter VK1NPW, John VK1ET, Peter VK3BFG, Eddie VK6ZSE, Peter VK3APO

Administrative Committee

John VK3PZ (Treasurer), Greg VK2SM (Assistant Treasurer), David VK3RU (Secretary), Mal VK3FDSL (Office Manager), Phil VK2ASD (President), Chris VK5CP (Vice President)

- 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, Marketing, Publications and AGM Committee

Robert VK3DN (Director), Phil VK2ASD (Director), Jim VK3PC, Graham VK4BB (Broadcast), Roger VK2ZRH (Director) Publications sub-Committee (AR Magazine, Callbook etc): Peter VK3PF (Editor AR), Peter VK3PH (Editor Callbook), John VK3PZ (Treasurer), Ernie VK3FM, Peter VK3AZL, Evan VK3ANI, Ewan VK3OW, Bill VK3BR

- 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 (Director), Owen VK2AEJ, Ron VK2DQ, Mal VK3FDSL (Office Manager)

- 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.

Radio Activities Committee

Chris VK5CP (Director), Geoff VK3TL

Contests sub-Committee

Alan VK4SN, Denis VK4AE/3ZUX, John VK3KM, Tony VK3TZ, Kevin VK4UH, Colin VK5DK, James Fleming VK4TJF

Awards sub-Committee

Bob VK3SX, Marc VK3OHM, Laurie VK7ZE, Alan VK2CA, Alek VK6APK, David VK3EW, Paul VK5PAS, ARDF sub-Committee: Jack VK3WWW, ARISS sub-Committee: Tony VK5ZA

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

QSL Card sub-Committee

Geoff VK3TL, Alex VK2ZM, John VK1CJ, Max VK3WT, June VK4SJ, Stephan VK5RZ, Alek VK6APK, John VK7RT, Craig VK8AS

Historical and Archive Committee

Peter VK3RV, WIA Historian, (Leader), Drew VK3XU, Linda VK7QP, Martin VK7GN, Ian VK3IFM, Will VK6UU, David VK3ADW, Jennifer VK3WQ/VK5ANW, Roger VK2ZRH (Director)

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

IT Services

Robert VK3DN (Director), Tim VK3KTB

- Provide an IT resource to other committees and the WIA Board.
- Be responsible for the off-site data back-up of 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 concept trials.

Affiliated Clubs Committee

Ted VK2ARA, Mal VK3FDSL (Office Manager), John VK3PZ (Treasurer), Phil VK2ASD (Director)

- 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 ratios in Affiliated Clubs
- Manage the Club Grants Scheme
- Identify and bring regional Affiliated Club issues to the attention of the WIA Board.



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Radio Clubs:

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- Will introduce newcomers to amateur radio
- Run regular meetings and functions
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Further information on clubs can be found on the WIA website

www.wia.org.au

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