

Amateur Radio

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ILLW reports

- ▶ Updated homebrew rotator
- ▶ Programming cable issues
- ▶ WSJT modes update



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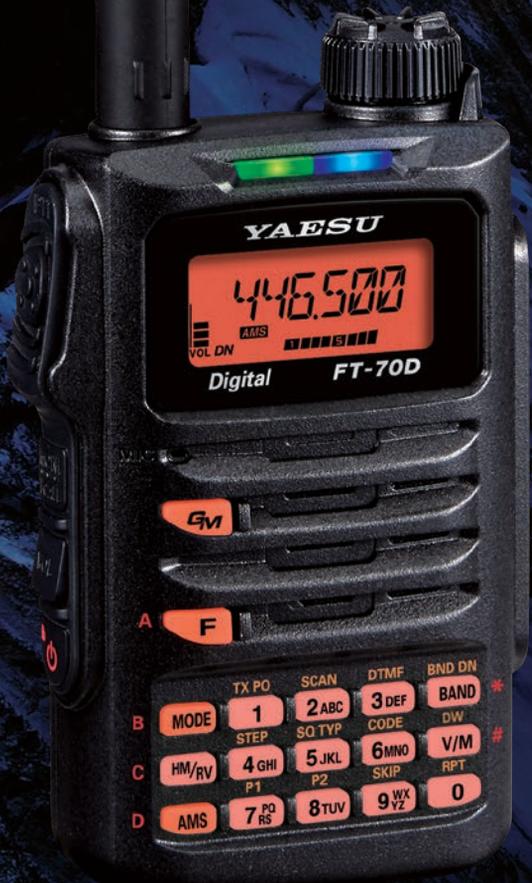


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This month's cover:

Dramatic skies at Cape Leeuwin during the International Lighthouse Lightship Weekend (ILLW). See the stories of various ILLW activations in this edition. Photo by Hans Fairhurst VK6XN.

Contributions to Amateur Radio



Amateur Radio is a forum for WIA members' amateur radio experiments, experiences, opinions and news. Manuscripts with drawings and/or photos are welcome and will be considered for publication. Articles attached to email are especially welcome. The

WIA cannot be responsible for loss or damage to any material. Information on house style is available from the Editor.

Back Issues

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

Photostat copies

If back issues are unavailable, photocopies of articles are available to members at \$2.50 each (plus an additional \$2 for each additional issue in which the article appears).

Disclaimer

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

Amateur Radio Service

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

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Editorial

Peter Freeman VK3PF

Changes afoot

Back in January, the Board requested the Publications Committee (PubCom) to prepare a document on ways in which cost savings could be found with regard to *Amateur Radio* magazine. As Chair of PubCom, I drafted a document and circulated it to the members of the committee for input. We further discussed the draft at a face-to-face meeting in early February. The final document was submitted to the Board shortly thereafter.

Readers will be aware that there has been discussion in the past about dropping the print edition of the magazine and going to a digital-only magazine. The discussion paper pointed out that some members prefer a hard copy magazine, perhaps reinforced that only a relatively small number of members have opted out of receiving the print edition. The paper noted these facts and thus rejected going to a digital-only magazine at that time was likely to disenfranchise a significant number of members.

The paper concluded that the most logical option to lower costs would be to reduce the number of issues produced per year, going from 11 issues per year to six issues per year. Our sister society NZART made the same decision some time ago.

The previous Board considered the paper and decided to refer the paper to the new Board, which took office after the May Annual General Meeting.

The new Board spent a considerable amount of time discussing options for the magazine. At its September meeting, the decision was reached to reduce magazine production to bimonthly,

thus from the start of 2018, *Amateur Radio* magazine will appear every two months. The decision was announced by Director Greg Kelly VK2GPK in the WIA News broadcast for Sunday 17 September.

PubCom has not yet discussed the decision. We will be discussing the implications at our September meeting, currently scheduled for 25 September.

We will need to liaise with advertisers, suppliers and our regular contributors. We will be making contact with those involved in the coming weeks.

In the short term, the decision will result in considerable savings in the 2018 financial year. The change will also allow PubCom to consider further changes for the future.

Regardless of any changes in the future, one thing is certain: if your magazine is to continue, we will need contributions from you the members and readers. That contribution might be as simple as a contribution to one of the state or Club News columns, an article about a radio-related activity that you have undertaken or perhaps a technical article about your latest project. Remember that guidelines for contributors can be found at: <http://www.wia.org.au/members/armag/contributing/>

Whilst we work through the steps required to implement the change, I personally am looking forward to longer days and warmer weather as we move out of the wintery start to spring. Hopefully I will be able to make time to activate some summits and parks.

Until next month,
Cheers,
Peter VK3PF





Board comment

Justin Giles-Clark VK7TW

Oil Tankers and Organisational Life Cycles

Organisational redesign is usually measured in years rather than months and the Board and Strategy Committee is hard at work discovering what changes are required, gathering input from members and stakeholders, planning the implementation in a structured and managed way and ensuring that members have access, input, opportunity to influence and get involved in the changes within in their representative organisation.

Organisational lifecycle research shows us the stages that organisations go through and it generally follows four or five phases or stages something like (1):

- 1). Start-up, birth or creative expansion
- 2). Growth or directional expansion
- 3). Decline or expansion through delegation
- 4). Renewal or expansion through coordination
- 5). Death or expansion through collaboration

Larry Greiner's model (2) has stood the test of time and he refers to whether a phase is evolutionary which is where there is an extended period of no significant disruptions versus a revolutionary phase which refers to a period of considerable disturbance within the organisation. Each revolutionary period is characterised by the dominant management style.

If we stand back and take a look at the Wireless Institute of Australia (WIA) and align phase 1 (creative expansion or birth) to when the WIA became a national body then we can demonstrate how applicable Greiner's organisational life cycle

model actually is and how it can explain the current circumstances and where we need to move to.

Phase one is initially described as evolutionary at birth where there are no significant disruptions and the organisation expands through the hard work and creativity of its founders creating both products and markets. The original Board lead by Michael Owen negotiated with all state and territory Divisions to agree on the terms and conditions to allow the creation and definition of a truly national WIA.

Greiner makes an interesting observation when this phase turns revolutionary creating a leadership crisis as the management style used to create the WIA was not enough to sustain it long term which required a more structured form of management. Michael and the Board adapted and assumed this role and setup structures accordingly to evolve and continue to grow the organisation.

Phase two is characterised by a period of evolutionary stability where organisational structures, accounting systems, communications channels, organisational machinery, etc. are established and processes become formalised. Directive leadership is the prevalent style however this progressively becomes less efficient as the organisation becomes more diverse, complex and cumbersome with a centralised hierarchy.

This creates a crisis of autonomy – the next revolutionary phase starts – due to a need for greater levels of delegation clashing with the directive management style. Lower levels in the organisation

find themselves unaccustomed to making decisions as the founders adhere to centralised doctrines. This is where I suggest the WIA finds itself now.

To move to the next phase the organisation has to be able to successfully apply delegation in a decentralised organisational structure. Greater responsibility needs to be given to lower levels in the organisation and the Board can focus on steering and not rowing (3) the organisation and managing by exception. The start of phase three is evolutionary however looking to the future this phase turns into a revolutionary phase as the management layer senses they are losing control as the organisational diversity increases and the lower levels in the organisation become accustomed to working without management interference - the organisation then experiences a crisis of control. I have put references at the end of the comment so you can read about phases 4 and 5.

What is the relevance of all this theory I hear you ask? It helps us predict, prepare and manage the organisation into the future. We are in period of revolution at the end of phase two and the new Board is preparing to move the organisation to a more decentralised organisational structure with committees undertaking the rowing of the organisation empowered by the delegation of functions to these committees and groups within the WIA. This will enable the Board to

Continued on page 4

WIA Team compete in overseas ARDF events

Amateur Radio Direction Finding (ARDF) competitions in the USA, and at the IARU Region 3 Championship in Mongolia, saw the WIA Team win a swag of medals. Ewen VK3OW, Jenelle VK3FJTE and Jack VK3WWW were at the Harrison Ohio event in July, which was coupled with the IARU Region 2 ARDF Championships. Fierce competition saw them win medals. Then they broke up, most back to Australia for a rest, and another caught up with a stateside relative.

Next was the 11th IARU Region 3 Championships hosted by the Mongolian Radio Sports Federation.

The original three were joined by Peter VK3ADY and Kristian VK3FDAC. The WIA Team of five scored well in the medal tally. Congratulations to all.

IARU ARDF events need WIA membership, but the competing expense is borne by the individual.

A full story has been written for a future *Amateur Radio* magazine by Jack Bramham VK3WWW, the WIA ARDF Coordinator.

WIA survey wants your views

In a part of the ongoing consultation process the Wireless Institute of Australia wants to measure the views of those in Amateur Radio.

No, you don't have to be a WIA member, or even give your identity.

The WIA asks a series of simple questions and the answers will be automatically handled by software to come up with the results.

Questions are about how long you have been in Amateur Radio, what sparked your interest, awareness of WIA services, Amateur Radio magazine contents, volunteering and social media use. It's all about learning of your activity, motivation, and make-up, as the institute sets its path for the future.

Please take a moment to complete the WIA survey found on WIA website www.wia.org.au to and encourage others to also share their opinions.

The WIA Online Survey can be accessed via <https://www.surveymonkey.com/r/WIA1>

New WIA National & Inwards QSL Manager

John Seamons VK3JLS is a retired Electronics Engineer, who has spent his working career within the telecommunications industry in various senior management positions within both Telstra and Alcatel Australia.

As a keen DXer and an avid QSL collector and has been a frequent user of the QSL service over the years. John understands the IARU, regional and local QSL policies that are in place and is keen to ensure that the QSL is the final courtesy of a QSO.

His other passion is golf and as a past Vice President of his golf club, was very involved in the management and governance of that club. This same passion, skills and knowledge will be brought to managing the National Inwards QSL Bureau role for the WIA. He is very keen to work with all the state QSL managers to develop a good working relationship so the group can develop and put in place a National QSL Policy, and then standardise processing to ensure cost effective and efficient processing and delivery of QSL cards to WIA Members.

John will be working with the WIA QSL Operations Manager and staff and the QSL Managers around VK to ensure smooth and seamless operations. In his working life he was used to all-states meetings with colleagues and vendors via both face-to-face meetings and teleconferencing. John also brings administrative, educative and communications skills that will be put to good use in rolling out a new National QSL Policy and Process to QSL managers and WIA Members.

We wish John every success in his new role of WIA National & Inwards QSL Manager. If you would like to contact John his email is: vk3jls@wia.org.au



Board comment Continued from page 3

pull-up a level and start strategically steering this organisation.

This is an exciting time and we will be advertising many positions and opportunities for you to become involved and contribute to the running of your national WIA. I encourage all members and amateurs to seriously consider these opportunities.

Justin Giles-Clark VK7TW on behalf of the WIA Board.

Sources

1. Wikipedia. 2017. Organizational life cycle. [ONLINE] Available at: https://en.wikipedia.org/wiki/Organizational_life_cycle. [Accessed 27 August 2017].
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The WIA board reaches 100 day milestone

Jim Linton VK3PC

The Wireless Institute of Australia Board of Directors has quietly made progress in its first 100 days since the May Annual General Meeting held at Hahndorf South Australia in 2017.

Usually the members or constituents of a newly elected organisation or government like to know about achievements and future plans. The WIA is no different.

The seven member Board of Directors have held four meetings, during which there has been a lot to learn and of course some changes have been implemented.

One change has been the issuing of draft Board meeting Minutes to WIA members under certain conditions which are on the WIA website.

The visit to the WIA national office in Bayswater for nearly a week saw three directors look at its procedures, practices, customer service and facilities.

Among the few changes made have been new hours for receiving phone calls and those ringing out of hours are asked to use email or call back when the office is open.

The WIA Board has emphasised that

contact with the WIA is preferred via email or the online inquiry facility. The Frequently Asked Questions section on the WIA website might also contain the answer.

At each Board meeting the WIA finances are considered. The WIA has three new signatories for its bank accounts and this helps greatly. A lot more work is needed in the financial area as the WIA Board, with monthly input from its bookkeeper, is looking at the WIA revenue and expenditure, and where savings can be made.

The WIA Board wants to concentrate on its primary role and to give it more time to do so, and has started to revitalise the committee structure.

First there were a number of vacancies, a mix of resignations and some new areas identified by the Board. These have been in the area of the QSL bureau system, risk and audit, privacy and complaints, and a strategic look ahead for the WIA.

The new Terms of References for them had to be written or drafted, to be considered and decided.

The next step taken in late August will see all committees sent a series

of simple questions and asking that each have a minimum of seven active members.

Advertising through SEEK volunteers, Facebook and WIA channels is to be coordinated. A three member selection panel will look at all applications and fill positions.

Another area of attention has been the proposed changes to the WIA constitution. These basically were for the removal of the initial set up details and some house cleaning and modernisation.

The Constitution Review Committee reported again in June and after directors considered it, had consolidated feedback. The draft final changes will be put to the members, before becoming a motion at the WIA Annual General Meeting in May 2018.

Work has also been done on the WIA Election regulations and it needs further consultation with the Returning Officer but changes are expected for the next election.

The WIA Board hopes that WIA members and non-members thinking of re-joining can see that achievements and progress have been made already and more are to come.



Morsum Magnificat – Amazing Response!

Tony Smith G4FAI

Since the initial announcements that copies of all issues of the English edition of *Morsum Magnificat* (MM) were available for free download from the internet, there have been over 12,500 hits on the website, demonstrating that there is still widespread interest in Morse telegraphy!

Full Index now available

A new addition to the downloadable files is a searchable consolidated

index covering all issues of *Morsum Magnificat*, Numbers 1 to 89. With the assistance of the new index it is now possible to search the complete magazine archive with comparative ease.

All copies of the magazine together with four special MM publications: The Story of the Key; The MM Q&Z Codebook; The Key WT 8A Survey; and the new Index, can now be downloaded in a single zip file instead of singly.

Please note

Copies of *Morsum Magnificat* or associated publications downloaded from <http://www.n7cfo.com/tgph/Dwnlds/mmm/mm.htm> are copyright and are made available for personal use only. They may not be downloaded or distributed for any commercial purpose whatsoever.

Tony Smith G4FAI
Co-founder and first editor of the English edition of *Morsum Magnificat*.



My programming cable does not work – Solutions

Steve Ireland VK3VM / VK3SIR

Shown below is a simple example of a typical programming cable; it's actually for a Yaesu FT-8x7 series radio.

Yet when you plug it in under Windows 7 – 10, you note that the Prolific Driver downloaded from Windows Update has not deployed properly (Photo 2).

No matter what you do you cannot get the driver to work.

Many amateurs use radios manufactured by Wouxun and Baofeng – and have USB Programming cables that also demonstrate the same error.

The reason for this is that the Prolific Corporation has put code into the driver that looks for special architectural markers to detect genuine chips. There is also code within the driver that detects and prevents adjustments being made to (“hacking”) the Windows driver.



Photo 1: A programming cable.

Potential Solutions

A Use cables with DB-9 Serial Connectors

Only use and purchase cables with the traditional DB-9 serial connector.



Photo 3: Cable with DB-9 serial connector. (Source: <https://pentagon-headsets.co.uk/wp-content/uploads/2015/05/115.jpg>)

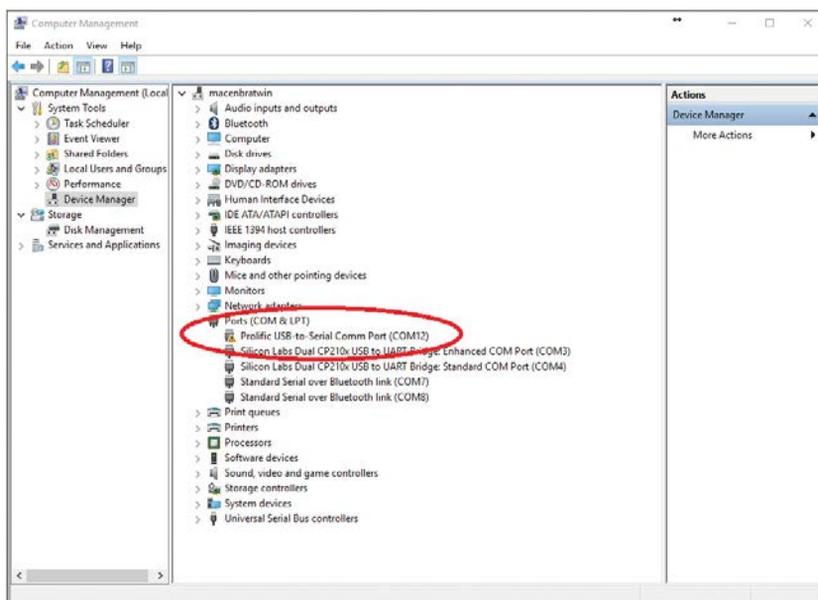


Photo 2: Computer Management page.



Photo 4: Computer Ports. (Source: <http://www.what-is-my-computer.com/images/computer-mouse-ports.jpg>).



Photo 5: A cable with serial-to-USB adaptor. Source: <https://prodzone-tripplite.netdna-ssl.com/shared/product-images/lg/U209000R-FRONT-L.jpg>

Most PCs still have a facility for you to connect one serial Port. In the above image the port labelled “IOIOI” – using a DB-9 Male connector – is a serial Port.

For laptops you can purchase a serial-to-USB adaptor from a reputable supplier – preferably a brand-name cable that does not use “Prolific” chips.

B Use Linux versions of the software.

Most recent Linux kernel implementations have code that has been written by third-parties that does perform the architectural detect for fake chips. Most common packages, such as Chirp (<http://chirp.danplanet.com>), run under Linux as well as Windows.

I have heard many success stories from amateurs using Linux within Virtual machines to program radios and interchange data with Windows and other systems.

Yet the stories of success way outweigh those of disaster due to the complexities of Linux.

C Use the Version 3.2 Prolific Driver.

The Version 3.2 Driver, written and released in 2006, works with early minimally-updated versions of Windows 7.

But there can be huge issues with versions of Windows 7 that are not fully “service packed”. Issues forcing installs of old drivers are amplified in Windows 8 and 10. You will see issues range from machine instability (Blue-screens-of-death or “Unhappy faces” due to Windows Kernel crashes) to crazy erratic USB mouse and keyboard actions.

The Version 3.2 driver, found on “The Internet”, is not a good and viable long-term solution.

D Replace the chip itself with a driver supported chip.

If your surface-mount soldering/desoldering skills are good, then the PL2303TA chip, a direct pin-for-pin replacement to the PL2303HXA, is an answer. Prolific has a migration guide at <http://prolificusa.com/files/PL2303TA%20Migration%20Guide.pdf>

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You can find genuine chips in quantities of around five chips for around \$US7 on eBay. Again there are risks here.

Note that I have often had to use this pathway for chips embedded into equipment, such as Sound Card interfaces. It is annoying, but sometimes highly necessary.

E Retro-fit the Serial-To-USB Controller with a genuine, well supported model.

You can get great modules with genuine chips at a very inexpensive price from eBay. These modules are commonly used with Arduino-type Micro boards. An example of a common module available is shown below:

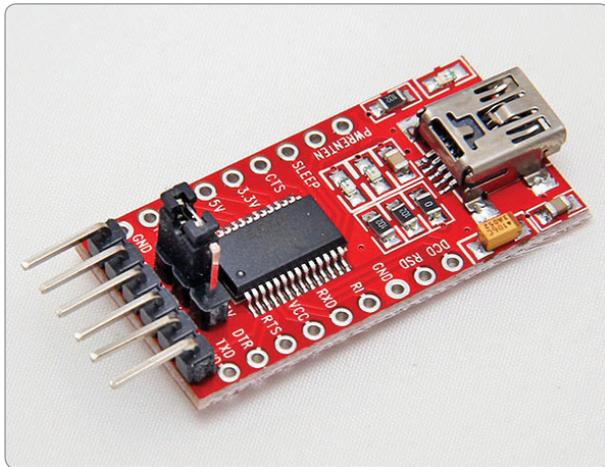


Photo 6: Common module. (Source: <http://g01.a.alicdn.com/kf/HTB15oTpIXXXXaXXXq6xXFXXu/Hot-Sale-5-5V-3-3V-FT232RL-FTDI-USB-to-TTL-Serial-Adapter-Module-for-Arduino.jpg>).

Most programming cables are based off these types of module – the cables are just these devices surrounded by a plastic housing with plugs to support connection to your radio.

The advantage of retro-fitting in better modules is that they are cheap and that they can be tested easily before hacking into the original cable.

Again there are issues associated with modules and ensuring that you have genuine, properly supported chips. As an example, the FTDI Corporation has on several occasions implemented technologies in their drivers to disable fake chips – but in the process these messy efforts have led to considerable consumer grief.

Note that the remainder of this article will focus on this method – cracking open the housing and retro-fitting in better serial modules. This is in many ways the best and cheapest solution when you already have made the investment. There are a few things that you must do though – which go back in the main primarily to basic computer theory.

But overall I advise that one should NEVER damage the original to the point where you can never go back,

especially when it is vital cables i.e. control cable to/from your PC/Radio.

Retro-fitting new modules

Step 1: Crack-open the housing.

Some people will cringe at the method that I recommend here – but I find that using a simple small “vice” that we often use for PCB work (often found inexpensively at Aldi) is often a good way to break adhesives used to seal devices.



Photo 7: Vice holding housing.

Gently apply pressure – not too much.

Upon releasing you will often find that the housing falls apart or that the adhesives holding down the case have been compromised. Sometimes additional “gentle persuasion” with a micro-screwdriver is required.



Photo 8: The opened housing showing inside.

I do not recommend knives as I have taken too many people to hospitals over the years with the results being either stitches or even microsurgery as a result of cuts.



Photo 9: Magnified chip.

This should reveal the inside module.

Step 2: Examine the module.

Shown is a magnification of the chip in the preceding diagram. It reveals that this chip is a PL-2303HXA (by the PL2303HX and the last letter of the next line being an "A").

Prolific's advisory at http://www.prolific.com.tw/US/ShowProduct.aspx?p_id=225&pcid=41 is extremely important. The chip used here is old (if genuine) and is not supported by Windows 8/10 drivers. Also the same web page gives warnings about counterfeit chips.

Many old and/or counterfeit chips found their way into radio programming cables.

Step 3: Select your replacement module.

How do you know if the chips on the module are fake or not? It is really hard to tell as counterfeit components in the marketplace are a common complaint from those in the repair and electronics development industry. There are also lots of fake high-value-high-cost FTDI chips about too.

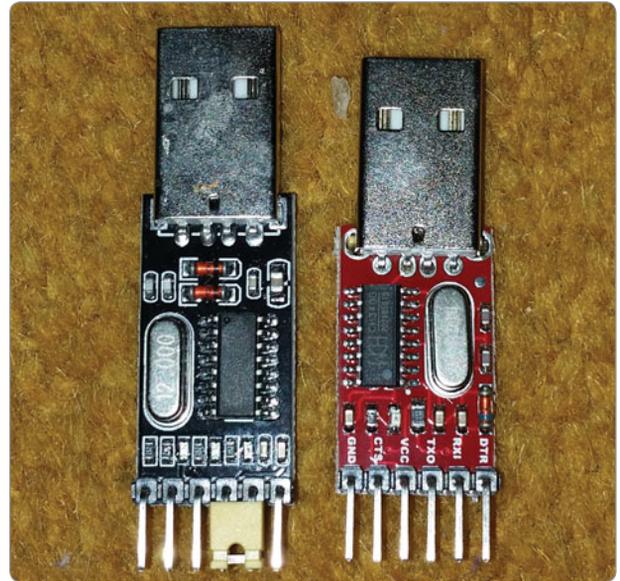


Photo 10: Module replacements.

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New Ununs



Balun Kits.



1.63 mm Hard Drawn Copper Wire.

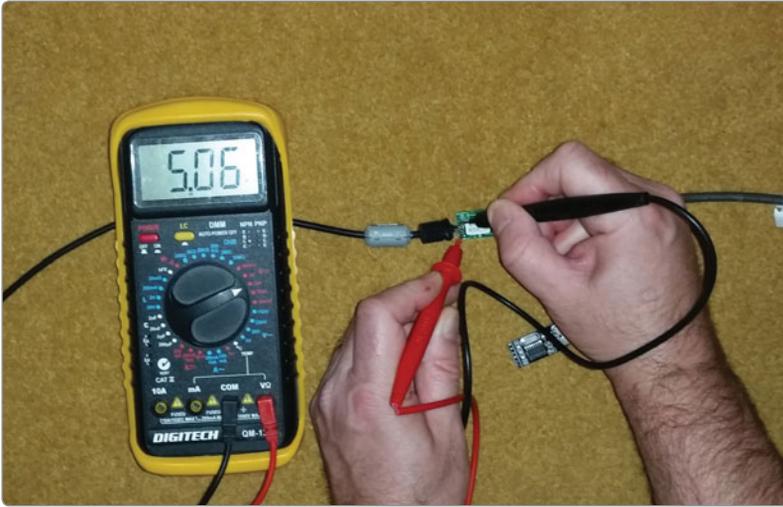


Photo 11: Checking the original cable.

I have found that the best way to get around this issue is to use a genuine Chinese-manufactured chip that is reliable but so cheap that it has not been worthwhile to copy it – the CH340G made by WCH in China (see <http://wch.cn> through a translator such as <http://www.translate.google.com>).

The CH340G Serial chip has found its way into many very inexpensive Arduino modules as well as the primary serial programming chip. It is well tested. From my experience I find that it is reliable enough to achieve good results.

Drivers are also natively supported by Windows 7, 8 and 10.

These modules cost approx. \$AU1 each to get into Australia. The module on left in the above diagram has full DTR/DSR set of serial Lines. By putting the DSR/DTR lines together you can generate a reliable but low current power supply that can be used to drive other chips (Side Note: many handhelds made by Icom, Kenwood and Yaesu require these lines to provide power to drive switching transistors). The module on right has only Tx/Rx Data lines.

Both can be configured to work at 3.3 V – but almost all radios in the marketplace are programmed at TTL voltage levels (5 V).

Step 4: Examine the original module before you cut anything!

Examine the original cable first. This will help you to select the type of module that best suits your needs. In most cases you will find that a module that has only Tx/Rx data lines is suitable. These modules usually have a jumper that can be used to select 3.3 V (used by Arduinos) or 5 V (TTL). Set this as appropriate.

I have also found that many original modules in the programming cables have their Tx/Rx lines labelled incorrectly.

It can be a bit of pot-luck with some modules; often you have to refer to circuit diagrams that you can find online for most radios and/or use a multimeter to determine matching lines and voltages. In your favourite search engine enter the model number of your radio then the words “programming cable circuit diagram”. E.g: search term “UVD1P programming cable circuit diagram”. Then select “Images”. Find an image that best represents what you are trying to do.

The example details how to properly cable a “UVD1P” Radio to a CP2102-based module. Use a multimeter to double-check the connections and pinouts – never trust anything straight from Google.

I recommend that wires should be neatly soldered to the pins. You could carefully remove the connector-blocks – but I have found that you can damage tracks on boards doing so (and have done so myself with good desoldering tools). There could also be no space for terminal connectors in the final housing.

- Solder on the ground lead.
- Solder on the lead that should transfer the received (Rx) data.
- Solder on the lead that should transfer the transmitted (Tx) data.

Then check and double-check with a multimeter. You should now be ready to test.

Step 5: Test.

Carefully place the module on non-conductive, static free material. With extreme care, test the module with programming software.

If all works you can now seal things up (next step).

If things do not work then the most common fault is Rx and Tx lines crossed. De-solder these lines and resolder in reversed Tx/Rx patterns to original settings.

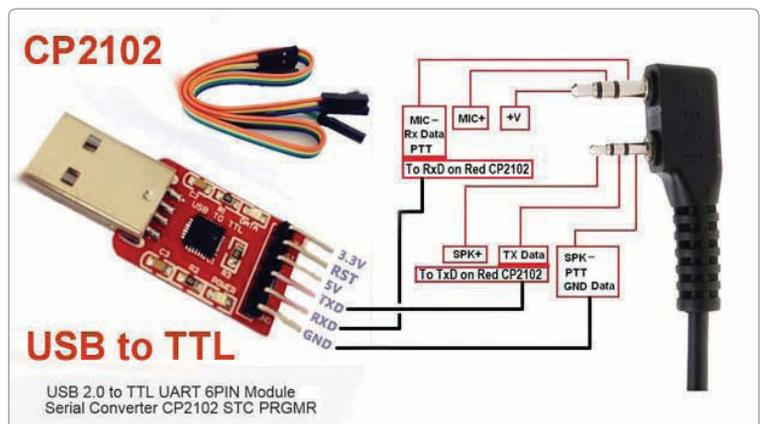


Photo 12: Programming cable circuit diagram. (Source: <http://www.miklor.com/COM/images/cp2102red.jpg>).

Then check with a multimeter again before re-testing.

Step 6: Packaging

Some amateurs repackage the module into the original housing; other Amateurs heat-shrink over the module and cable. I personally prefer to fit the new module into the original housing again and seal it back up with a good epoxy adhesive such as Araldite.

You may be required to bend the connecting pins on the modules for these to fit in the case. Note that I often make a "U" shape out of these pins before soldering the wires to them.

Sometimes the original housings also have traces of carbon or other conductive materials in order to aid in protecting the circuit from dropping out due to stray RF entering the shack. This is why I always replace the original housing if I can.

Conclusion

Many people have asked me to write this article to assist other Amateurs overcoming simple technical issues with regards to programming up radios under the HAM (Help All Mankind) principle.

Again as I stressed earlier, Amateurs in my opinion should try to avoid buying programming cables that have embedded serial chips i.e. plug straight into USB. Yet sometimes this is unavoidable.

Hopefully these simple tips will help amateurs to solve rig communication and software issues that we commonly experience.

73

Steve Ireland VK3VM / VK3SIR

Assessor: 3-072

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RSK Visit July 2016

Mark Beacham VK3XB / VK3XXX / 5Z4XB

On a bright sunny uncharacteristically cold day in July 2016 I had the opportunity to visit the Radio Society of Kenya.

Kenya is one of the most developed countries in Africa, situated on the eastern coast of Africa with a population of approximately 45 million inhabitants. Kenya shares borders with Somalia, Ethiopia, Uganda, Tanzania and South Sudan. Kenya is situated in a volatile part of the world with frequent incursions and influence from the north leading to high levels of terrorist alerts and occasional attacks. Crime in Kenya is one of the challenges for this developing country with foreigners and locals frequent targets of robbery at gunpoint amongst other crimes. The economy in Kenya is very much developing, with an economy around one tenth the size of that of Australia.

The Radio Society Kenya (RSK) is the successor to the East African Radio Society which broke up in the 1980s around the time the old East African Community was disbanded. This break up led to the creation of a number of distinct national radio societies including the RSK. While this was a technical break up, it is common for the societies of Kenya, Rwanda, Uganda and Tanzania to assist each other where possible and the RSK website (<http://www.qsl.net/arsk/>) has become a valuable resource for the neighbouring societies and visitors to these countries.

Posted in Nairobi Kenya since November 2014, I had been conversing with Ted Alleyne 5Z4NU, Chairman of the RSK. Ted, a widely experienced gentleman of British background was very accommodating and refreshingly realistic about the situation in

Nairobi and Kenya more broadly. With an aviation background with the national carrier of Kenya, Ted is the driving force in the RSK; he along with a handful of other members manage to negotiate the many challenges of dealing with a Government in Africa.

My experience of Africa so far has been what is everyone expects, massive bureaucracy, challenging environment, lack of development but somewhat of a surprise has been the warmth and generosity of most of the local people. Entertaining trips to the office punctuated by the occasional sighting of a giraffe in the national park which runs alongside my route to the office are always a wakeup call to where I am. Kenya itself is an astounding place, teeming with wildlife and a friendly gateway to Africa for those from the developed world Kenya should have a huge tourism economy, there are however issues crippling the development of international tourism.

Still finding their national identity after being so influenced by the English and missionaries, the local population are slowly regaining pride in their nation. Still very much underdeveloped, racked by corruption and mismanagement, Nairobi is a place of extremes with brand new black Range Rovers driving through streets surrounded by slums, not the ideal ground for amateur radio to flourish. In fact the licence application fees of around Ksh.3000 (AUD\$38) are beyond the reach of a large percentage of the population. One saving grace for local amateurs is that transceivers are duty free, so Kenyan amateurs lucky enough to have the income to support the hobby have some support at a Government level; however as with anything in this country of contradictions and extremes this is likely to change at a moment's notice.

Currently there are believed to be approximately 50 5Z4 calls which are current, 33 of these

Photo 1: The RSK Clubrooms in 2016, in need of a little TLC.





Photo 2: The tower and antenna, becoming overgrown with vines.

are members of the RSK. Ted reports that as far as the RSK is aware there are only four active operators with another four who operate sporadically. Most activity in Kenya is on 40 m with only one 2 m repeater covering Nairobi which is rarely used. The daily struggle to survive for most Kenyans makes radio operation and investment in equipment seem a real luxury in this developing country.

With only two DX spots on the cluster reported since 1 January 2016, it shows the lack of activity from within 5Z4. Kenya is a key gateway into even less active African countries with active

support given to Rwanda (9X) and Uganda (5X) along with Tanzania.

The RSK clubrooms (Photo 1) are the central point of activity for the RSK and activity in 5Z4, very modest, a former pumping station that is believed to pre-date WW2. The clubhouse has been converted to a meeting room with a tower, dual band beam and a toilet. The clubrooms are very sparse and sturdy but in need of some repair. These clubrooms are utilised for exams, meetings and occasional operation by visiting international hams wishing to activate Kenya on the DX bands. There have even been cases of international visitors

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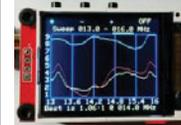


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camping out in the clubrooms for a number of days, something that is not advisable given the security challenges faced in Nairobi and lack of security guard at the club rooms.

The tower while in good condition is constantly invaded by vines and the beam that sits atop is constantly broken by heavy birds using it as a perch. Brave members of the RSK have to climb the tower every 6-12 months to remove the vines from the rotator



Photo 3: The Clubrooms in 2017, after vandalism.

and repair the beam. The challenges of being in an equatorial region, things grow fast and birds grow big!

With the deteriorating condition of the RSK club rooms and the worsening crime position in Nairobi it is becoming more and more difficult to keep up the facility. In previous months fences have been broken down, gates stolen, windows broken, porch destroyed and water supply interfered with by locals trying to gain money or simply find a place to sleep. This situation is not tenable. There is a real requirement for 24 x 7 security at the location at the cost of approximately \$800USD per month; the current membership cannot support this expense and there is a real risk of the facility closing down within the coming 12 months. If this was to happen the minimal activity from 5Z4 would decrease further and lead to a further deterioration in the hobby in Kenya as a whole.

Due to lack of funding and significant further vandalism in March 2017 (see Photo 3), it has been decided by the RSK to sell the clubrooms unless funding can be quickly found. This is a very sad decision as the facility allowed visiting amateurs to operate and

a convenient base for the group's activities.

On the day of my visit I was one of three attendees at the monthly meeting of the RSK, Ted Alleyne 5Z4NU, Wilfred Githuka and myself. Wilfred was undertaking his novice exam, the system in Kenya stipulated that novice licence holders must be students and are permitted on all bands except 20 m.

The novice exam is derived from the American ARRL system while the full call is derived from the English RSGB system. Both of these exams bear a large resemblance to the old Australian system before the introduction of the Foundation licence. Sitting by while Wilfred completed his exam, I read through the exam bringing back memories of my novice exam 15 years ago, the scene was not that unfamiliar from my memory with Greg VK3VT at NERG supervising way back then. I am happy to report that Wilfred passed his exams and at the time of writing was awaiting his novice call sign to be allocated.

My personal experience with international licensing has been an eye opener, while we as VK licensees are very fortunate to be under the CEPT umbrella and can operate in a majority of CEPT countries, there are hundreds of countries outside this umbrella. Licensing in these countries ranges from frustrating to near impossible. In Kenya for example the rules around licensing and what is required change often, my application for example was allowed for a 2-year period where usually the maximum period was

Photo 4: Ted 5Z4NU and Wilfred Githuka after an assessment event.



one year. Local knowledge in country is invaluable and in the case of Kenya the RSK and Ted in particular have been very generous and supportive with their time and contacts. In addition to Kenya I also investigated licensing in India as I frequently travel to this location. I was astounded to find a ban on use of our equipment such as HT in public places. I guess we in VK don't realize how lucky we are!

My 5Z4 license has been

granted and I will be on air as 5Z4XB whilst in Kenya.

It is my intention in the coming few months to activate 5Z4 from a suitable location, Nairobi is difficult due to aging electricity infrastructure and high noise levels. I will possibly activate on a monthly basis when I am in country, it's a shame HF conditions are not great right now but the more activity even in poor conditions the better. I look forward to many VK contacts if

conditions allow.

Hopefully this short piece has given you some insight into our hobby in another part of the world and some of the struggles in some of the rarer DX locations.

Donations to the RSK and efforts to activate 5Z4 more regularly can be arranged through myself, VK3XB via supes@supes.com

73 for now from the 254 as the Kenyan young people would say....



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Mini Satellite-Antenna Rotator MkII

Julie Gonzales VK3FOWL and Joe Gonzales VK3YSP

In the May 2016 edition of *Amateur Radio* magazine, we described the design and construction of a mini satellite-antenna rotator. It used some small DC motors and a novel combination of 3D magnetometers and accelerometers to provide absolute azimuth and elevation feedback. Since then, we have received over 90 requests from readers for additional construction details and we know of a handful of units which have been successfully built and tested.

The original rotator was designed for quick set-up and portable operation at our primary school Amateur Radio clubs. It is very light-duty and can only be used with a small, dual-band, hand-held antenna. Some readers asked us if the rotator could be scaled up for a larger, permanent satellite antenna installation at home. Specifically, one which could handle two, much longer, cross-polarised Yagis, for 2 m and 70 cm, mounted on either side of the rotator.

This article describes the mechanical design and construction of the MkII mini satellite-antenna rotator including some improvements to the original electronics and software packages.

Design

We determined that this “medium-duty” rotator needed to have a horizontal through-shaft about 2 metres long, capable of handling balanced loads of up to 20 kg.

Keeping with the simple, low cost design approach, we decided to use the same motors and drivers, but to add proper bearings, sprockets and roller chains to both the horizontal and vertical shafts. The size and gear ratio of these sprockets was selected for the maximum reduction that would fit



Photo 1: Mini satellite-antenna rotator MkII.

inside the available enclosure.

A new motor speed of 2.0 rpm was selected instead of 0.6 rpm to account for the 10-to-32 sprocket gear-ratio.

The proposed design was carefully reviewed by more experienced members of the Amateur Radio Victoria Homebrew Group before we began construction.

Components

Component selection was the key to keeping the overall cost down. As in the previous design, the enclosure was the most expensive part. However, we were surprised

to find a small, IP66 steel enclosure that would do the job for around \$50. It had a lockable door, internal baseplate and a cable-entry panel.

Although the enclosure was steel, the horizontal and vertical shafts were made of aluminium tubing to reduce any hard-magnetic interference close to the sensor mounted on the antenna boom. The shafts had to be stiff enough to handle the antenna weight. We decided the minimum tube size would be 25 mm diameter with a 3 mm wall thickness. Note: Most “25 mm” tube sold in hardware stores is actually 25.4 mm (i.e. 1-inch) in diameter. This will definitely not fit

the selected bearings. The correct tube must be purchased from a specialist aluminium supplier. For a little extra cost, you can get a smooth “bright finish” tube instead of the standard “mill finish” tube. This tube works better with the 25 mm hydraulic shaft seals that we used to keep the weather out of the enclosure.

Next, we had to source the ball bearings. There were two flange bearings for the horizontal shaft. For the vertical shaft, which only enters the enclosure through the cable-entry panel at the base, we needed a pillow-block bearing and another flange bearing. Again, we were surprised to find just the right parts on eBay, from China of course, for around \$8 each.

The sprockets and chain parts proved to be far more difficult to source. The choice was between various local products, with high bore-machining costs, or overseas finished-bore products with high freight costs. However, by purchasing all the parts in quantity from one US on-line store for around \$70 a set, the freight cost was minimised. Unfortunately, only 1-inch bores were available in the US, so they had to be shimmed to fit the 25 mm shafts.

Construction

After all the parts arrived from around the world, construction proceeded as follows:

Tube, plate and angle stock:

The thick aluminium shafts were cut using a tube cutter. The plate and angle stock was cut using an angle grinder with a thin disk.

Enclosure:

The enclosure was marked out using digital callipers and then centre-punched before drilling pilot holes. The three (3) shaft cut-outs through the enclosure’s 1.5 mm steel plate were made using a 30 mm hole punch (well worth getting).

The six (6) 10 mm flange-bearing mounting holes in the enclosure were cut using a step-drill.



Photo 2: Shaft seals and flange bearings.

Unfortunately, the enclosure had an internal earth-stud too close to one of the flange bearings: It had to be ground flush using an angle grinder inside the small enclosure – a tight squeeze.

All machined steel in the enclosure was then treated with cold-galvanising paint.

The door and enclosure earth studs were connected using a ground wire with round crimp lugs.

Flange bearings:

The three (3) flange bearings were fastened to the inside of the enclosure using M10x25 mm stainless steel bolts, flat washers, spring washers and nuts. A flat nylon washer was used on the outside surface of the enclosure. Some silicon sealant was applied to both surfaces of the washer for added ingress protection.

Baseplate assembly:

The enclosure baseplate was removed and two 10 mm holes were drilled for the pillow-block bearing and four slotted 3 mm holes for the motor brackets.

The pillow-block bearing was installed using M10x50 mm stainless steel bolts, flat washers, spring washers and nuts. Additional flat washers and nuts were used to raise the bearing off the baseplate 22.5 mm.

The small sprockets were attached to the keyed motor shafts. Note: The grub screws on these did not screw in all the way. A 3/16 inch tap was required to finish the threads properly.

The motors were attached to the motor brackets and the brackets were mounted on the baseplate, all using M3x6 mm CSK bolts, flat washers, spring washers and nuts. The baseplate assembly was then re-installed into the enclosure.

Horizontal shaft assembly:

The horizontal shaft and its large sprocket were assembled first. All bearings are the “self-centring” type. If they are out of alignment they can be re-aligned by gently tapping the shaft using a wooden block. The large sprockets, with the 1-inch bores, have to be shimmed to fit the 25 mm shaft. A rectangular



Photo 3: Cable-entry panel.

piece of aluminium drink can, cut out with scissors, worked just fine.

All bearing and sprocket grub screws were hand tightened initially, but later required a thread-locking fluid.

Vertical shaft assembly:

The vertical shaft and its large sprocket were assembled on the cable-entry panel in the same manner.

The vertical shaft assembly was then installed into the enclosure and secured by the cable-entry panel screws.

Chain installation:

With the sprockets mounted firmly in place, the chain had to be broken using an angle grinder, threaded over the sprockets and then re-connected using joining links.

The chain tension can be adjusted by re-positioning the motors using the slotted mounting holes.

Electronics package:

The electronics package, which comprised two, 3-Amp, DC motor drivers, the Arduino compatible Pro-Micro controller and a new serial adapter module, was mounted on a 100x100x1.6 mm aluminium plate. The motor drivers were mounted using tapped nylon spacers. The rotator controller and serial adapter module, which have no mounting holes, were epoxied to special feet cut from two strips of fibreglass PCB or perfboard,

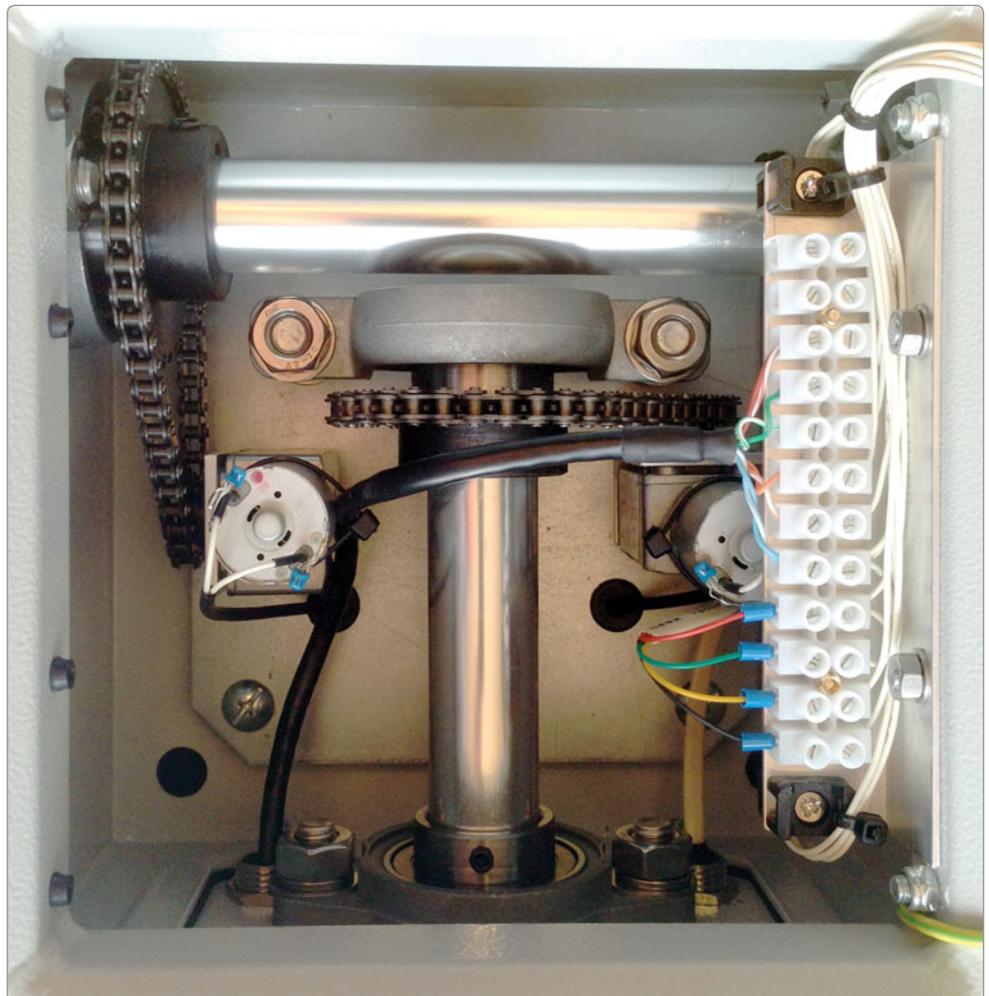


Photo 4: Internal mechanical assembly.

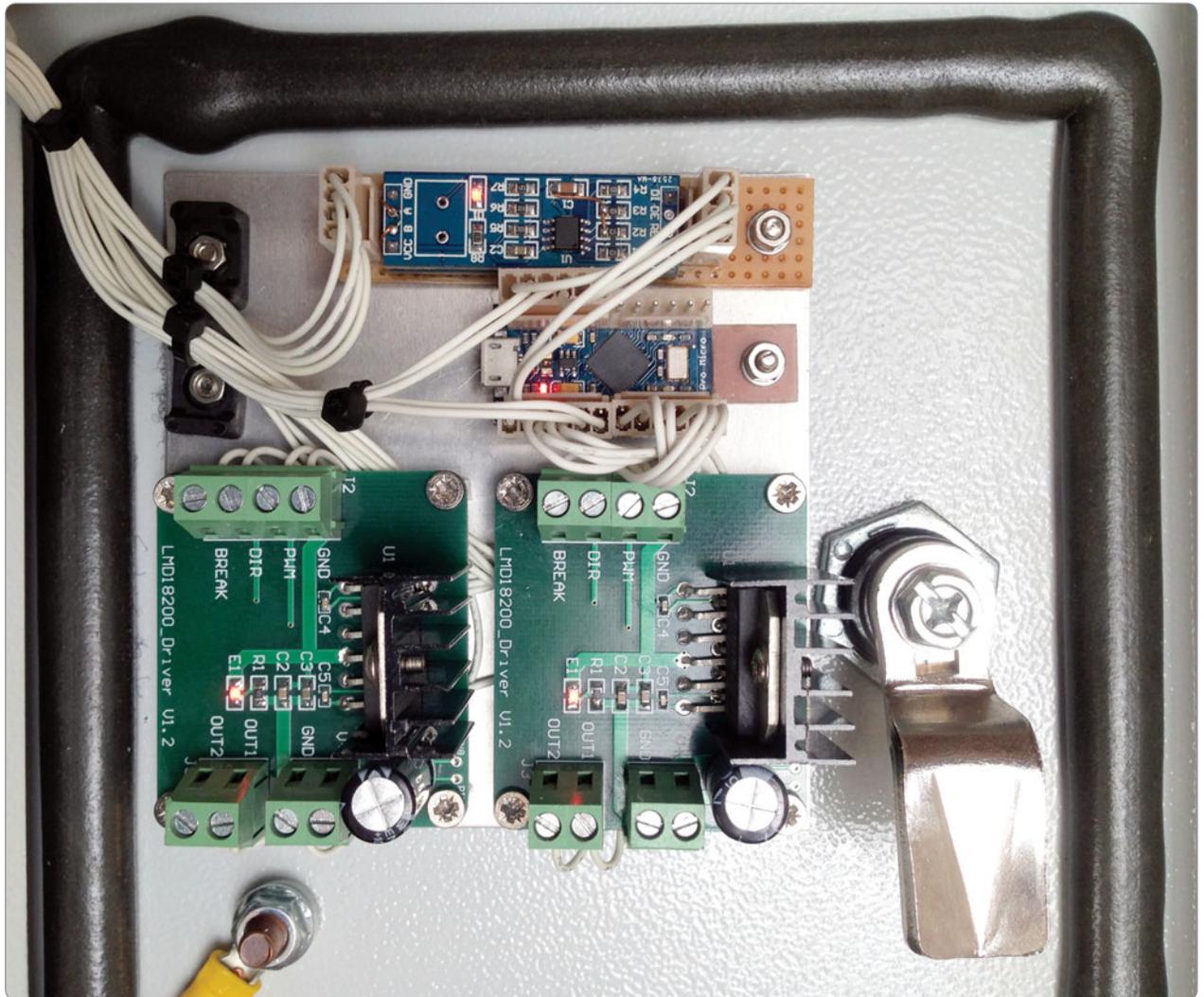


Photo 5: Electronics package inside door.

respectively. The mounting plate was finally attached to the inside of the enclosure's front door using self-adhesive Velcro strips.

The electronics package was wired to a 12-way screw-terminal block, mounted on a piece of 25x25x1.6 mm aluminium angle attached to the door-hinge bolts. The terminal block provided a convenient breakout point for the station and sensor cables entering the enclosure through two metal cable glands on the cable-entry panel.

Station and sensor cables:

The station cable was made from standard CAT5 UTP cable and comprises: +12VDC, TXD+, TXD-,

RXD+, RXD- and GND. The sensor cable was made from standard flat telephone cable and comprises: +5 V, DATA, CLOCK and GND. The sensor cable is part of an I2C bus, which did not tolerate the extra capacitance of a screened cable very well.

The sensor was soldered to the sensor cable and was encapsulated in heat-shrink tubing sealed at each end with silicone.

Data communications:

The MkII version of the rotator controller no longer uses the built-in Arduino Pro-Micro USB port for communications back to the satellite tracking PC, which would now be located in the shack.

There were two reasons for this: A limitation with the Windows USB serial port hand-shaking implementation; and a limitation with the maximum length of the USB cable.

Instead, for rotator control and position feedback, the spare TTL serial port of the Arduino controller was connected to a homemade, 4-wire, full-duplex RS422 adapter. The latter was fashioned from two, readily available, 2-wire, half-duplex RS485 transceiver modules. Note: RS422/485 uses differential line drivers and receivers that work over twisted pair cables to provide high noise immunity and extended range. This solution required a small



Photo 6: RS422 to USB converter.

modification to the original rotator controller software but it was tested to work reliably over 1000 ft/300 m of CAT5 Unscreened Twisted Pair (UTP) cable. Two whole pairs of

this cable also provide DC power to the rotator. Incidentally, a home Wi-Fi solution was also considered but not expected to have sufficient range. In any case a physical DC

power cable would still be required.

Back in the shack: An RS422 to USB adapter for the controller pc was fashioned using two of the same RS485 modules and a TTL to USB converter module, all housed in a small prototyping enclosure. The unit also provides a breakout for the rotator 12V DC power supply.

Software modifications

Several, backwards-compatible software modifications have been made since the original software release. The main

change was better filtering of the sensor data. This makes the sensor calibration process much easier and more accurate; and the antenna positioning is smoother

Photo 7: RS485-TTL & TTL-USB modules.

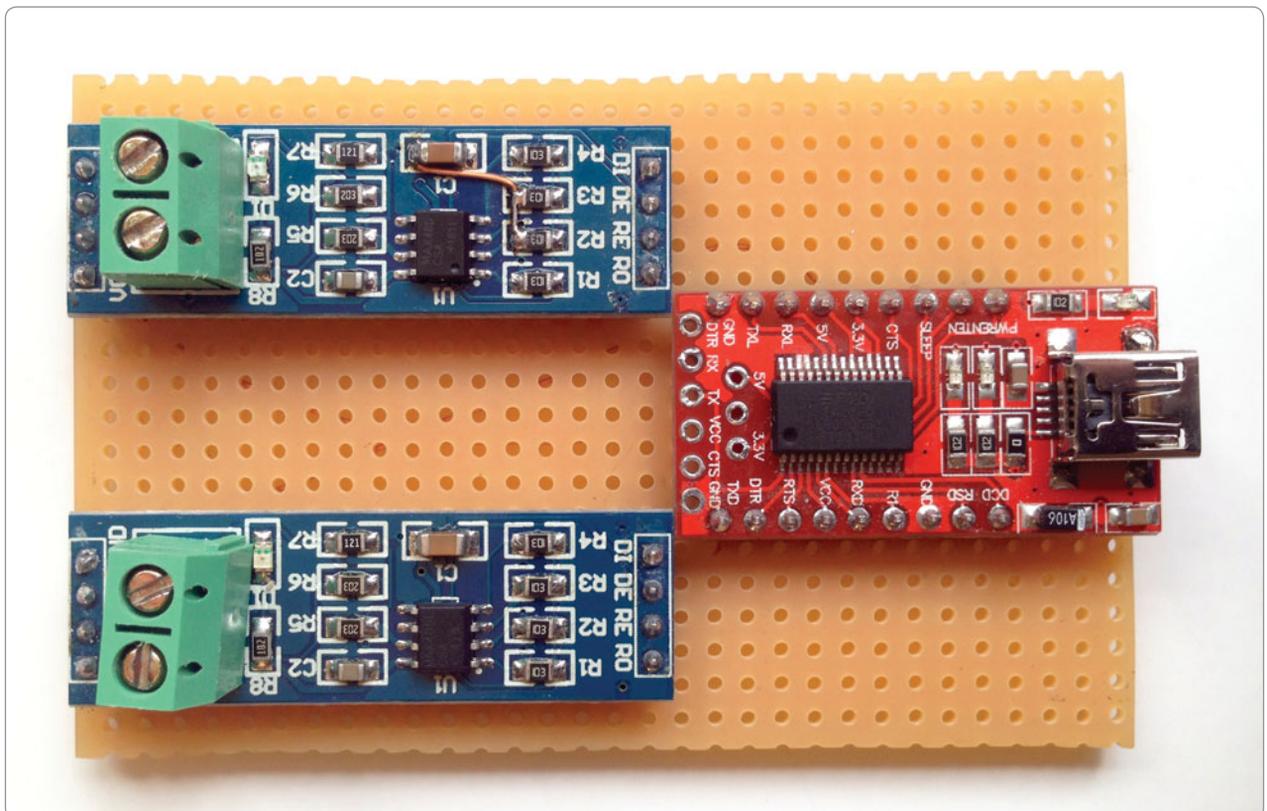




Photo 8: Tracking FO-29.

as well. Note: A fully automatic, self-calibration procedure using an adaptive, ellipsoid-fitting algorithm was considered, but discounted since the rotator only has 2 degrees of freedom while the sensor requires 3 degrees of freedom for a full calibration.

Conclusion

The scaled-up, MkII version of our original mini satellite-antenna rotator is rugged, weatherproof and will handle a couple of medium sized Yagis without any problems. No, it is not accurate enough for narrow-beamwidth microwave or EME work,

as we are frequently asked, but it is just fine for Amateur satellites. The total parts cost was under \$350.

For free source code, detailed engineering drawings, electrical schematics, parts list and further construction information please email us at info@sarcnet.org



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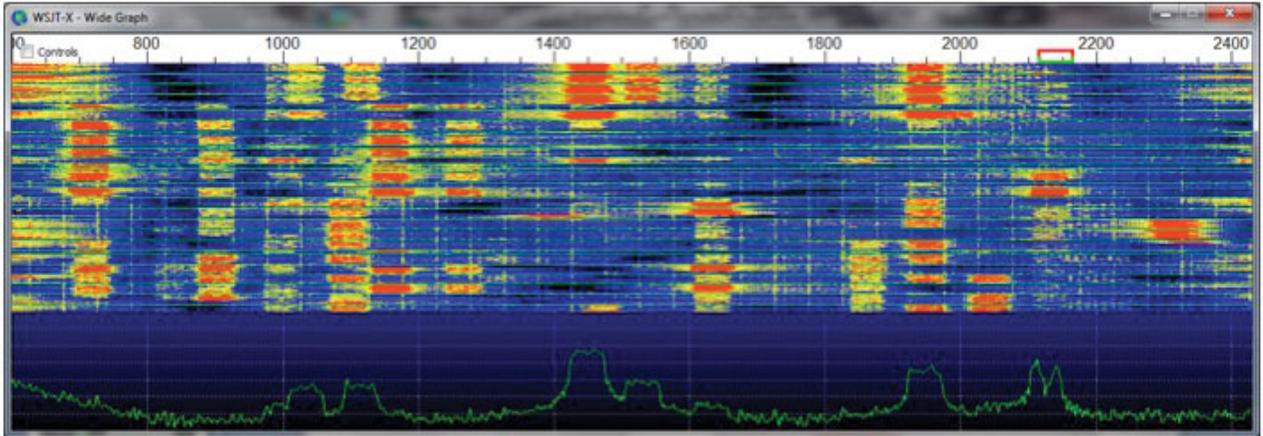


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Oh Danny boy, fate is calling

Joseph Kasser VK5WU



FT-8 Waterfall display.

Last month's article discussed my experiences in setting up and operating the JT-65 square dance earlier this year. However, after spending three weeks in China in July, I came back and found there were no JT-65 signals to be heard on 40 m. That was because in the middle of July the 1.1.8 beta version of the software was released which improved the dance in the following three ways:

1. The dance is sped up by a factor of four.
2. The bandwidth is reduced.
3. The FT-8 dance is partially automated.

The dance is sped up by a factor of four

The faster mode is "FT-8" (Frankle-Taylor design, 8-FSK modulation) and the whole sequence happens in 15 second steps rather than 60 seconds at a cost of about a 2 dB decrease in sensitivity according to the documentation. I thought that the 60-second time JT-65 slot was too long; the 15 second FT-8 time slots are almost too fast. FT-8's speed and its semi-automatic mode in its current version makes

it useful for dabbling in RTTY contests in which a fixed message is transmitted (one that does not use an incrementing QSO count). You just need to adjust the message sequence.

On-the-air I have problems working stations that are less than -10 dB with FT-8 while I can work them down to -20 dB using JT-65. Still there are many stations to work and I see new ones every day. I receive weaker reports than -10 dB and see other stations making QSOs with weaker signal reports but out of all the stations I have called when seeing them with a signal report of less than -10 dB, I only worked one. On the other hand, the strongest FT-8 signal I have seen was +8 dB on FT-8 while the strongest on JT-65 was 0 dB.

The bandwidth is reduced

FT-8 is narrow band just like JT-9. Looking at the passband such as the typical busy one shown in Figure 1, I have decoded a maximum of nine contacts in the passband in both JT-65 and FT-8. The FT-8 decoder does not always seem to decode all the signals in

the passband.

The FT-8 dance is partially automated

While operating in FT-8, when I double clicked on a CQ call in the receiving window, and the other station replied to my call, the software initiated the QSO sequence and prompted me to log the QSO within one minute. Wow, the QSO was much faster than my LanLink automated AMTOR QSOs of 25 years ago. However, I still had to take care of a couple of things manually:

1. When the CQing station I called replied to another operator, the software was still not smart enough to recognise the situation and kept calling CQing station. I had to halt the TX manually to avoid QRM.
2. When someone called me in response to my CQ the software did not recognise it and kept calling CQ. I had to manually advance the sequence. Since I had 2 seconds or so to react to get in step, this usually meant that the software repeated the CQ call until I clicked on the

signal report button. It still took one dance cycle to synchronize. From then on the rest of the QSO was automatic if the other station was still there: one or two were not and the contacts were missed.

Comments

The JT-65 mode is still not automated in this version of the

software. But Beta 1.1.8 is definitely an improvement over 1.1.7 on HF and stations seem to be moving from JT-65 to FT-8. However, the faster notes make the sound of the pipes less appealing. Still the point is to make contacts, not to listen to the sound of the pipes. FT-8 can usually be found 2 kHz below the JT-65 frequencies, e.g., 7.074 kHz and 14.074 kHz on 40 m and 20 m.

Danny Boy, fate (FT-8) is calling; make your choice. JT-65 is slow and sensitive and there are still people to contact at a steady pace. FT-8 is faster but you have to be nimble to get in step if you call CQ; if you respond to CQ's then it is automatic and fast but you will work fewer people.



Silent Key

David John Spicer VK7EX

It is with sadness that we pass on that David VK7EX has passed away.

David was born on 29 October 1940. A man committed to his family throughout his life. David ran his own mechanical/service station business in his early life and then worked for the Hydro on the West Coast for many years. He suffered a cancer set back in his 40s but survived and moved into Helen Street Ulverstone where he worked on car stereo systems amongst other things for the local car yards and enthusiasts. There always seemed to be a vehicle parked in the lane for him to work on. David

was extremely fussy and he spent a lot of time making things just so.

David loved all animals but mainly galahs. These birds he fed every day around 5 pm. When the local council announced they were going to poison them he mounted a successful public campaign to leave the birds alone and became known locally as the bird man.

David had always been interested in radio and like so many came to Amateur Radio from the CB boom. He was first licensed as VK7ZDJ and for years mainly operated on 2 and 70. David was actively

involved with various North West Coast Amateur radio clubs and served as president many times. He was a very strong willed and determined man who always did what he thought would benefit the hobby. Driving across the Leven River Bridge towards Burnie his tower stuck out like a sore thumb but he always considered it a thing of beauty.

David is survived by his daughter, two sons and several grandchildren.

Vale David VK7EX.

Dick van Beek VK7DIK.



Hamads

FOR SALE – VIC

Collins 51J4 receiver in excellent condition \$350.00

AR7 in rack with coil boxes GWC \$150

Howard ex-VK3ADI P/h 0408998910

FOR SALE – VIC

For Sale – Shack clean out: Yaesu FT-480R 2 m transceiver with handbook and mobile bracket, \$250.

FT-208 2 m HH with handbook, \$100.

Kenwood TH205A 2 m HH no handbook, \$50.

Mirage 2 m B108 linear amplifier with remote control & instructions, \$200. All gear as is. Prices firm.

Call Brewster VK3YBW on

03 9527 2661 after 6 pm and before 10 pm EAST. If no answer, please leave a message.

WANTED – VIC

Relay for a 2 m linear amplifier model ELH 230, or complete unit. Battery type valve 3A5 twin triode.

Word processor CITIZEN model CBM 10 WP, working or not but the LCD screen must be in good condition and undamaged.

Call Brewster VK3YBW on

03 9527 2661 after 6 pm and before 10 pm EAST. If no answer, please leave a message.

FOR SALE – SA

VK5JST HF/VHF Aerial Analyser kit (see AR article December 2015, and VK5JST website- <http://www.users.on.net/~endsodds/aamk7.htm>).

Build yourself an extremely useful item for your ham shack and improve your HF antenna efficiency.

For more details see AHARS website <http://www.ahars.com.au/kits.html> or email vk5srp@wia.org.au

WANTED – QLD

User manual (or photo) copy of Tradipper user manual model TE-15. All expenses paid.

Phone or reply to Merv VK4DV nights QTHR 0749 285537 or vk4dv1@gmail.com



International Lighthouse Lightship Weekend 2017 at Grassy Hill Light AU0019

Mike Patterson VK4MIK

The Tableland Radio Group (TRG) once again participated in the International Lighthouse Lightship Weekend on 19 - 20 August 2017 for the 13th consecutive year from the Historic Light atop Grassy Hill Cooktown in Far North Queensland. The light was constructed in 1885 and has been operational since.

Ross VK4AQ and XYL Bev drove up from Innisfail and met Mike VK4MIK at Mareeba whilst Jamie VK2YCJ drove up from near Newcastle for the second year – over 3000 km. We met up with Dave VK4FUJY and Pat VK4MUY in Cooktown. That night we had a dinner at Cooktown RSL Club and discussed the planning and other ideas for the following day. After a nice breakfast at the local café, it was time to set up the station on the hill – which has a well-deserved reputation for strong winds and has seen three pergolas badly damaged during our previous ILLW operations! We set up our inverted V antenna atop the 15 metre portable mast and then used poles over a council concrete table and a tarp over it for our operating position. The trusty FT-897D and MFJ 948 ATU connected to a 100 Ah AGM battery with an 80 watt solar charger, with back up in case those

Irish chaps dropped by, composed the operating equipment.

We had a reporter from the Cape York Newspaper interviewing us early in the day. Mel was very interested in the event, our equipment plus attributes of Amateur Radio as a means of communicating as Cape York has large areas where there is no mobile phone coverage and satellite phones are quite expensive. She asked many questions and took photos and we are looking forward to reading the article. We talked about other stations we had worked whilst doing the event over the many years and she was very interested in the Alice Springs Amateurs operating near the Todd River Lighthouse.

We made contact with 16 ILLW stations in Australia and New Zealand and made contact with the team at VK8GM at the Todd River Lighthouse!! They were in very good spirits and justly proud of their lighthouse as they should be. There were also quite a lot of Amateurs wanting to make contact with the lighthouses and they also showed great interest and support for it.

Jamie was monitoring the propagation and other lighthouses and got the message that VK2BOR

Tacking Point Light AU0034 were keen to get in touch before they closed down as the weather was deteriorating with strong winds. We made the contact with Henry RXing them at Q5 S7. It later transpired that other stations were also getting hit by the bad weather.

We also had an enjoyable contact with VK3OLS Cape Otway Lighthouse AU0011 and Richard gave a good description of his working conditions with Q5 S4-5. VK3SPL Bill, Split Point Light AU0032 let us know that the Cape Otway Light was keen to make contact with us.

It's this co-operative spirit and obvious pride in the lights selected by the various groups as well as the opportunity to set up and operate as a portable station that sets this event as unique. The International Lighthouse Lightship Weekend event is an International Amateur Radio Event which attracts well over a thousand amateurs worldwide. The efforts of the Organisers are much appreciated for its ongoing success.

Mike Patterson
For Tableland Radio Group
VK4GHL



Wanted



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

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

Setting the tone for the weekend, our first contact was made at 11.07 am local time and surprisingly was VK3WI down at Williamstown Timeball Tower AU0026 of which members of WANDARC were helping Tony from ARV man for the weekend. With the rest of the day spent calling CQ lighthouse, we managed to log 66 contacts 27 of those being lighthouses with 40 m being the band of the day with some 20 m contacts as well, leading into a nice 80 m evening slot with VK7NWT and the boys on 3.590. We had to close the station at 7 pm as we were not allowed to sleep on site; and had to drive five mins down the road to Highfields Station, a Parks Victoria site for the night with "The Lady of History" as her guests.



Photo 3: The antenna that was set up for the weekend.



Photo 4: Lighthouse from inside the Lighthouse.

Sunday was a bright and early start we were hoping to start around 6 am but opted for an extra hour of sleep and arrived back on station around 8 am. 40 m was again alive with lighthouse traffic VK2, VK3, VK5, VK7 and VK4 were all heard and logged. We kept calling as much as we could till 3 pm and then had to pack up and head home as the tour operation closes at 4 pm. We will again do this next year but with more people and hopefully permission to stay overnight at both Cape Schanck and Williamstown Timeball tower with a total of over 150 calls and 32+ lighthouses it was a great weekend.

Andy VK3VKT





ALARA

Diane Main VK4DI

ALARA members present the WIA News

What a thrill was felt by all the ALARA committee when we were asked to present the WIA National News for 27 August. Graham VK4BB approached us to reinstate a previous event of having a dedicated YL broadcast.

Naturally we said YES PLEASE! The announcers were: President Shirley VK5YL, Tina VK5TMC, Lyn VK4SWE, Alizah VK4FOX and Diane VK4DI. We have offered to do it again and perhaps use some different announcers.

What a great way to draw attention to the YL Operators in VK. Thanks Graham and the News broadcast team for the opportunity.

Feedback from some OMs has been positive. Well done ladies.

Contesting

Recently we have seen two very Australian Contests come and go. The first being the RD Contest and checking our log, I know there were very few YL operators. We worked Helen VK2FENG, Linda VK7QP, Leonie VK2FHRK. Bill and I worked our usual multi 2 station as VK4HH and had a ball.

Congratulations to Linda VK7QP (see her story) who went solo in the RD for the first time. What a great achievement!

Flying Solo

Over the past two years Martin VK7GN and I have been setting up a remote station at New Norfolk. This is about an hour's drive from our home in Bellerive, where the local noise is too great to hear anything on the air.

Martin has been the lead, and I have assisted where I can. It has

been a long process to find how to communicate between the two locations with minimal lag time. We have a Kenwood TS590 at each end. The linear amplifier at the shack provides antenna switching and is linked to the home computer via Team Viewer.

We had just succeeded in getting everything set up, when Martin found he needed to go into hospital for an operation. So we left the shack set up for remote operation with the idea that he would be able to operate the radio from home during his convalescence.

We then arrived at 12 August with Martin in hospital, and the Remembrance Day contest weekend. I enjoy this contest as it is a relaxed affair, and it is a chance to meet up with friends from around Australia. So I thought I would have a go. I gave myself a target of 100 contacts. Not too ambitious but this would be my first contest without Martin close at hand to give advice, and the first contest operation for the remote station. It felt like I was flying solo for the first time.

I had previously set up my computer with the VKCL logging program. I had a check list for how to turn everything on, and it all lit up appropriately. It was 0300 UTC so now to listen for the first contact. All went OK.

So now for the next contact, and in the middle of my transmission the linear amplifier shut down. Aaagh. Then it came back up again. Phew. I must have overloaded something – meanwhile my contact at the other end is saying 'VK7QP, where did you go?'

I found I needed to treat the linear amplifier gently. I think the

best description is that it is fickle. If I got too excited, or transmitted for too long, it would shut down. So I was not game to call CQ, but limited myself to S&P.

Things went well on 40 metres until about 6 pm, when it really started to slow down. I had made about 50 contacts – half way to my target. I decided to take a break for dinner. I then returned and went on to 80 metres – remembering to switch bands on the logging program too. It was quite lively across the band.

I resolved that I would get to my target in the one evening rather than starting up again on the Sunday. I had plenty of things needing doing, including a visit Martin in hospital. In addition, I was concerned that having shut down overnight, I might not be able to start up again the next day.

So it got to 10.00 pm local time and I was thinking I might reach 100 easily. But I got stuck in the 'nervous nineties' at about 10.45 pm. There were only about 10 stations calling CQ and I had worked them all. So it was time for a bold move and call CQ.

The linear amplifier seemed to behave if I was kind, so I put out a short CQ, and then again. Stations came back to me. This was good. However, the poor ergonomics of the station then came into play. I was operating a foot switch for the boom microphone, which was above the computer showing the linear amplifier operation. I needed to keep an eye on that while I was transmitting in case it shut down. My laptop with the logging program was far to the left, so I could not record a station in the log and talk at the same time. I could not read



Photo 1: A very unergonomic station configuration.



Photo 2: After a configuration change, the station is now much easier to operate.

the screen on my laptop while I was transmitting. I felt like a one-armed paperhanger. Nonetheless, I reached 111 contacts by 11.00pm.

I went to bed happy that I had reached my target, and had given the remote station its first workout in a contest. Flying solo was a little nerve-wracking but very rewarding.

Martin is recovering well. Now he is home he has helped me review both the ergonomics and the linear amplifier operation. He has built a shelf so the radio and microphone are aligned, and the laptop operates both the logging program and the linear amplifier remote operation.

I am better organised for the ALARA contest at the end of August. We'll have to wait and see how I go.

Linda VK7QP

This was followed two weeks later by our own ALARA Contest.

ALARA Contest

Although noting that the conditions were not the best we have seen, there was some decent propagation into the USA for a short time on Sunday 27 August.

VI4ALARA managed a respectable 222 contacts on HF and certainly spread the word about ALARA.

It was great to hear the YL operators making contacts and being encouraged by the OMs.

Diane VK4DI

ALARA Publicity officer



Silent Key

Norman Stanley VK2BNS



It is with sadness that we advise the passing of Norman Stanley VK2BNS, of Hillsborough, City of Lake Macquarie on 6 June 2017, aged 88 years.

Norm, after leaving High School, joined the BHP Steel Works in Newcastle as an Electrical Apprentice. After completion of his Apprenticeship, he joined the Marine Division of the BHP where he spent the rest of his working life as a Marine Electrician. After his retirement from the BHP, Norm started his own computer business.

During the 1960s, Norm obtained his Amateur licence and joined the Hunter Branch of the NSW Division of the WIA. He was a Past President and Patron of the Hunter Radio Group.

The Hunter Radio Group extends its deepest sympathy to Norm's wife, Veronica, and their two sons, Shane and Christopher and their families.

Submitted by Rodney Prout VK2CN
On behalf of the Hunter Radio Group



Over to you

Benefits of Membership of the Wireless Institute of Australia

Ben Broadbent VK5BB

I may be preaching to the converted here but I hope to give the readers something to think about and encourage you, the reader, to inspire other Australian amateur radio operators who are not members of the WIA, to sign up and become members of the Institute.

The club, of which I am a member, The Amateur Radio Experimenters Group here in VK5, provides a service as the VK5 QSL Bureau and regularly sorts and distributes incoming QSL cards for all VK5 WIA members. A comment by the Lead of the QSL card sorting group was that he held a large collection of QSL cards for "non-eligible" (non-WIA members) recipients and that they could end up in the paper recycling bin!

I thought, "What a waste! All that effort to make that DX contact and to lose the excitement of receiving that return QSL card confirming your contact, which just might have been a "rare one", all just because you are not a member of the WIA! What a loss!"

My ongoing thoughts are here and I trust you all see and understand what I am trying to put across and understand that membership of the WIA benefits ALL Australian licensed amateur radio operators without prejudice, fear or favour!

We need to encourage non WIA amateurs to join and "one" of the privileges they get in return for being a member is their incoming QSL cards forwarded to them, at no extra cost! And amongst other privileges, one main one is that you are still allowed to play amateur radio!

Those that listen to the regular WIA National news broadcasts would have recently heard one of the new directors Greg VK2GPK, give us an update on the state of affairs within the WIA, including the financial state, which is not the best! I also remember, at the Open Forum of the WIA AGM, a statement being made that we need to increase membership which in turn would help the WIA financial base.

Now, if every WIA member encourages one non-member to join, the WIA would potentially double its membership and this will seriously help with the WIA finances that will allow the WIA, as a recognised representative at the many different National and International forums and government agencies, to continue to support our hobby.

We also need to encourage amateur radio club members who are not WIA members to

join to. I know it is not compulsory but WIA membership means you, the member, do have some say in the future of the hobby and assist with the preservation of the Bands and privileges that are under threat!

I am not a Unionist, but I was a Union member! By being a member I did have some minor privileges, one of which I could put my point of view to the Union Executive and if I wanted, I could give the Union President or Secretary a hard time in his office. If not a member, I would not have gotten past the front door and not be heard; irrespective of how much notice they actually took from me!

People out there are grumbling; "Things are just not right or going the right way and are just going down the gurgler!" or, "I don't agree with the management or the way they are doing or running things within the organisation!"

Well if you are not part of the respective group, you are not party to be able to bring any influence, however minor, to bear! If you are not a member due to your disagreement with the "big organisation", then by withholding your membership you are actively contributing in a negative manner to the slow decline of services that the "big organisation" can afford to provide in support of our hobby!

OK, another one of the "stumbling blocks" promoted by non-members; "it is expensive being an amateur radio operator and membership of clubs and the WIA is just too much!"

Well, have a look at it this way and you could use this as part of "selling" that membership of the hobby is not that expensive. Over the years, most amateurs have invested reasonably heavily in their amateur radio equipment or will do so in the ensuing years. So why aren't they willing to pay for a bit of "insurance" to help to ensure that they will be allowed to continue to "play" amateur radio on the bands???

It is fulfilling to encourage people into the hobby and it is a great way of keeping active, both mentally and physically where it applies (Hiking into parks, climbing towers, planning and building projects etc.). Amateur radio QSOs also break down isolation barriers, allowing operators who may be isolated for many different reasons, perhaps in a remote location or even just in a retirement village, they can talk via radio to others who have similar interests etc. There are plenty of amateurs who have restrictions,

limitations and various disabilities but they still get out there and play amateur radio very successfully and they don't grumble, they get on with it and enjoy their hobby!

But people who grumble about the cost of membership of clubs, associations and licences etc.; they are selling the hobby short and I believe they cannot be really serious about the hobby. Well, if they don't want to play nicely and be sociable without the grumbles, well perhaps they should play tiddly winks and vegitate! Do we need those grumblers; perhaps not?

The cost of being an amateur radio operator is cheap, especially once you have your gear and smart people can round up basic gear relatively cheap. However, I will lay it on you that the average amateur has probably between \$5,000 and \$15,000+ invested in their gear, so your ongoing fees are cheap as I will tabulate below:

- Your ACMA amateur radio licence, \$53
- WIA membership, \$95
- Club membership, \$70 (my local club fee all inclusive)
- total cost per annum, \$218
- Which equates to \$4.19 per week, or approximately one cup of quality coffee at a good coffee shop?

So in my books, \$4.20 per week is cheap "insurance" so that we can play at amateur radio and its associated activities. I have had some feedback from my amateur friends that amateur radio is one of the "cheapest" of hobbies when compared to many other hobby yearly ongoing costs! You just need to budget effectively!

So readers, you should give due thought and consideration to my comments as merits in the promoting of why amateur radio operators should seriously consider membership of local clubs and the National Institution, the WIA!

Give it some thought folks and get out there, promote the hobby of amateur radio along with the benefits of club and WIA membership and sign up at least one non-member.

If every WIA member signed up one person, the WIA will double membership and the benefits will automatically flow on and back to all Australian amateur radio licensees.



Participate

Oceania DX Contest

7 - 8 October 2017



WIA Awards

Marc Hillman VK3OHM/VK3IP

Below are listed all New awards issued in August 2017, plus all updates to DXCC awards.
Go to <http://www.wia.org.au/members/wiadxawards/about/> to use the online award system.

New awards

2017 AGM

#	Call	Name	Category
29	VK5XY	Colin Luke	General Award
30	VK5XY	Colin Luke	Gold Award
31	VK3LDB	David Burden	General Award

DXCC Multi-band (1)

#	Call	Name	Mode	Band	Count
176	JA1SCE	Susumu Takase	Open	15 m	184
177	JA1SCE	Susumu Takase	Phone	15 m	128
178	JA1SCE	Susumu Takase	CW	15 m	145
179	JA1SCE	Susumu Takase	Digital	15 m	138
180	VK9VKL	Clifford Tindall	Open	20 m	100

DXCC Multi-band (3)

#	Call	Name	Mode	Band	Count
107	JA1SCE	Susumu Takase	Open	20-15-10 m	448

DXCC Multi-mode (CW)

#	Call	Name	Count
252	JA1SCE	Susumu Takase	165

DXCC Multi-mode (Digital)

#	Call	Name	Count
69	JA1SCE	Susumu Takase	156

DXCC Multi-mode (Open)

#	Call	Name	Count
454	VK9VKL	Clifford Tindall	100
455	VK2CMP	M Price	103
456	JA1SCE	Susumu Takase	206

DXCC Multi-mode (Phone)

#	Call	Name	Count
619	JA1SCE	Susumu Takase	158

Grid Square

#	Call	Name	Mode	Band
300	VK3LDB	David Burden	Open	HF
301	VK3LDB	David Burden	Digital	HF
302	JA1SCE	Susumu Takase	Open	HF
303	JA1SCE	Susumu Takase	Open	23 cm
304	JA1SCE	Susumu Takase	Phone	HF
305	JA1SCE	Susumu Takase	Phone	23 cm
306	JA1SCE	Susumu Takase	CW HF	
307	JA1SCE	Susumu Takase	Digital	HF
308	VK3VM	Stephen Ireland	Open	HF
309	VK3VM	Stephen Ireland	Digital	HF

Worked All VK Call Areas HF

#	Call	Name	Mode
2375	JA1SCE	Susumu Takase	Open
2376	JA1SCE	Susumu Takase	Digital

DXCC updates

DXCC Multi-band (1)

#	Call	Name	Mode	Band	Count
12	VK3EW	David McAulay	CW	30 m	321
33	VK4TJF	James Fleming	CW	20 m	140
43	VK7CW	Steven Salvia	CW	20 m	271
97	VK6WX	Wesley Beck	CW	20 m	125
148	VK3GA	Graham Alston	CW	20 m	163
168	VK3FZ	Roger Stafford	CW	10 m	116
54	VK3EW	David McAulay	Digital	20 m	187
146	VK2RT	Bruce Beresford	Digital	20 m	124
17	VK6WX	Wesley Beck	Open	20 m	201
32	VK4TJF	James Fleming	Open	20 m	184
75	VK2TTP	Peter Pratt	Open	20 m	139
100	VK3GA	Graham Alston	Open	20 m	262
145	VK2RT	Bruce Beresford	Open	20 m	139
166	VK3FZ	Roger Stafford	Open	10 m	196
101	VK3GA	Graham Alston	Phone	20 m	159
153	VK2TTP	Peter Pratt	Phone	20 m	139
167	VK3FZ	Roger Stafford	Phone	20 m	164



Don't forget to register for **MEMNET**.

DXCC Multi-band (3)

#	Call	Name	Mode	Band	Count
24	VK3EW	David McAulay	CW	30-20-17 m	881
37	VK7CW	Steven Salvia	CW	30-20-17 m	737
66	VK3EW	David McAulay	Digital	30-20-15 m	479
36	VK7CW	Steven Salvia	Open	30-20-17 m	779
73	VK3GA	Graham Alston	Open	20-17-15 m	580
102	VK3FZ	Roger Stafford	Open	20-15-10 m	548
86	VK3GA	Graham Alston	Phone	20-15-10m	406
103	VK3FZ	Roger Stafford	Phone	20-15-10m	439

DXCC Multi-band (5)

#	Call	Name	Mode	Band	Count
21	VK3EW	David McAulay	CW	40-30-20-17-12 m	1364
35	VK7CW	Steven Salvia	CW	40-30-20-17-15 m	1123
66	OH8LXT	Veikko Pennala	Digital	20-17-15-12-10 m	844
29	VK3EW	David McAulay	Open	40-30-20-17-15 m	1655
34	VK7CW	Steven Salvia	Open	30-20-17-15-10 m	1192
47	VK3SX	Bob Robinson	Open	40-20-17-15-10 m	943
65	OH8LXT	Veikko Pennala	Open	20-17-15-12-10 m	1209
72	VK3FZ	Roger Stafford	Open	30-20-15-12-10 m	810
73	VK3GA	Graham Alston	Open	40-20-17-15-10 m	805
52	VK3SX	Bob Robinson	Phone	40-20-17-15-10 m	923

DXCC Multi-band (7)

#	Call	Name	Mode	Band	Count
10	VK3EW	David McAulay	CW	80-40-30-20-17-15-12 m	1752
14	VK7CW	Steven Salvia	CW	40-30-20-17-15-12-10 m	1474
7	VK3EW	David McAulay	Open	40-30-20-17-15-12-10 m	2294
15	VK7CW	Steven Salvia	Open	40-30-20-17-15-12-10 m	1565
35	VK3FZ	Roger Stafford	Open	40-30-20-17-15-12-10 m	1028

DXCC Multi-band (9)

#	Call	Name	Mode	Band	Count
12	VK3EW	David McAulay	CW	160-80-40-30-20-17-15-12-10 m	2066
1	VK3EW	David McAulay	Open	160-80-40-30-20-17-15-12-10 m	2776

DXCC Multi-mode (CW)

#	Call	Name	Count
207	VK4TJF	James Fleming	172
223	VK6WX	Wesley Beck	184
240	VK3GA	Graham Alston	225

DXCC Multi-mode (Digital)

#	Call	Name	Count
33	VK7CW	Steven Salvia	138
55	VK3GA	Graham Alston	167
58	VK2RT	Bruce Beresford	136

DXCC Multi-mode (Open)

#	Call	Name	Count
345	VK4TJF	James Fleming	202
375	VK2TTP	Peter Pratt	164
376	VK6WX	Wesley Beck	247
431	VK2RT	Bruce Beresford	152
455	VK2CMP	M Price	103

DXCC Multi-mode (Phone)

#	Call	Name	Count
572	VK2TTP	Peter Pratt	164

Promote our hobby

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



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

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



VK2news

Tim Mills VK2ZTM
e vk2ztm@wia.org.au

As mentioned in the last notes, advising of future events a month or more in advance is difficult. An example was with Manly Warringah RS who decided to replace their Flag Pole contest with one based on post codes as advised in the September notes. On second thoughts – after the notes were submitted – they decided to return to a version of the Flag Pole and this was conducted in September. MWRS have received this year's ARNSW Development Fund Grant for a project to upgrade and modernize their field day and portable operations capabilities. Their repeater, VK2RMB 146.875, is now streaming on the internet. Many of their lectures are recorded and can be viewed on 'You Tube' at VK2MB-TV.

Central Coast ARC

The Central Coast ARC held their AGM in August and elected Bob VK2AOR as President, Rod VK2LAX as Vice President, Mark VK2CCR as Secretary and David VK2DLS as Treasurer. The committee is made up with Victor VK2BTV, Bob VK2PEP, Don VK2ZCZ, Bob VK2ZAR, Ian VK2HK and Mark VK2MP. Karen VK2AKB is lecture coordinator. The Kariong club rooms are open on Saturdays from 10 am. There is a lecture on FT8 scheduled for the 21 October.

Oxley Region ARC

Also having an AGM in August was the Oxley Region ARC at Port Macquarie where Henry VK2ZHE ended up with both the President and Secretary roles. Paul VK2ICQ is Vice President and Lindsay

VK2CLL is Treasurer and Education. Committee has Steve VK2ZSW, Dennis VK2DAM and Arthur VK2ATM. OxTales editors are John VK2AYQ and Trevor VK2TT. John VK2KHB is Historian. The Oxley club has been active recently with their communications caravan used in the RD, Light House weekend and for events with the public. A WICEN group has recently become active for the region.

Coffs Harbour & District ARC

Over time, many a VK2 repeater has found a home on a good elevated site, many of which turn out to be on Crown Land. To many repeater groups it comes as a shock when they get an invoice for rent of the site from the agency providing the site. This was recently the case when the Coffs Harbour and District ARC received an invoice from the Forestry Corporation of NSW. It is not a new occurrence but it sometimes takes a while until the State authorities controlling the site find you, often from the ACMA licensing records. The repeater installation is treated as a volunteer group which attracts the annual minimum fee of round \$475. Sometimes a discount can be negotiated but any charge adds to the repeater groups operating costs. There was an IPART Review of Rental Arrangements for Communication Towers on Crown Land conducted in 2013 and can be found by an internet search. There are few free rides available these days and it helps the bottom line if you can find a generous [elevated] private site.

WICEN NSW

WICEN NSW held their AGM late August. John VK2LJ was elected President with Mal VK2YVA as Vice President. Steve VK2MCA remained Secretary as did Doug VK2DCR in the role of Treasurer. This month there is field activities with Trek for Timor on the weekend 7 and 8. See kvrp.net.au

Hawkesbury Canoe Classic overnight on 28/29. Mid North Coast on 28.

Other Radio Club News

The Illawarra ARS meets on the second Tuesday evening at the Coniston Community Hall. Training in the Illawarra can be arranged through Ted VK2ARA Contact him via vk2ara@wia.org.au Early last month on Saturday 9 September there was a Tri Club picnic at Fitzroy Falls Reservoir picnic area with the Goulburn ARS, Mid South ARC and Illawarra clubs attending.

Another round of exams for a US license was scheduled in Sydney at the end of August. Blue Mountains ARC reintroduced a Winter-fest event in August. They are also have Foundation training and exams scheduled for October 14/15 and December 9/10. Summerland ARC held a successful SARCfest in late August with over 50 people in attendance. Their weekly newsletter carries extensive reports on their digital activities.

Rick VK2RR reporting in the Armidale and District ARC newsletter advised that recent work had been carried out to restore the Glen Innes and Terry Hie repeaters in the New England region to operational status. Along

with the new repeaters at Armidale and those to the east round Walcha being made digital ready, the North West sector of VK2 has an extensive network in place.

This month there is a 'QRP by the Harbour' planned on 22 October. There is also the 60th JOTA / JOTI over that weekend. Waverley ARS have a Foundation weekend planned for 25/26

November. ARNSW also have a Foundation weekend in November on 18/19. The bi monthly Trash and Treasure at the Dural site is on Sunday 26 November.

Fishers Ghost ARC has recently commenced Foundation training. They have commissioned VK2RFG, a 70 cm FM & C4FM repeater on 438.650 with a -7 MHz offset. Details at fgarc.org.au

St. George ARS have upgraded their 70 cm VK2RLE on 438.425 with -5 MHz offset to DRM plus. Details at www.vkdmr.info

News items for these notes are most welcome via email at the address vk2ztm@wia.org.au
73 – Tim VK2ZTM



Gold Coast Amateur Radio Society HAMFEST 2017 Saturday 11 November 2017

*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 06:30).
- 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-2017>
- Table bookings please contact hamfest@gcars.com.au

See you there!

Plan Ahead

JOTA/JOTI | 20-22 October



Plan ahead and contact your local Scout or Guide group. They may be unaware that you might be able to help their young people discover Amateur Radio.

The purpose of **JOTA-JOTI** is to enable and encourage Scouts around the world to communicate with one another by means of amateur radio and the internet, providing a fun and educational Scouting experience and promoting their sense of belonging to a worldwide Scout Movement.



DXTalk

Luke Steele VK3HJ

It seemed that the sun had gone to sleep for most of August, until a large sunspot group 2673 appeared, throwing out some M-class solar flares, and causing solar blackouts, with a coronal mass ejection expected to affect the Earth. Assigned region 2674 was also large, but not so active, and in early September, there were several sunspot groups, with the solar flux and smoothed sunspot numbers reaching 183 and 122 respectively. This is the most solar activity for quite some time.

Activity on the bands remains reasonable, at least up to 20 m, but some are reporting 15 and 10 m DX, with a lot of amateurs testing the capabilities of the new FT8 digital mode. Your author now has a 160 m antenna up and working well, and most evenings see contacts into USA and Asia.

Most of the DX logged in August has been IOTA activations and special event stations, including R24RRC (AS-044), RI0LI (AS-022), AL3/AA7CH (NA-042), TX5EG (OC-027), A35JP/P (OC-191), YJ0ST (OC-035), 5W0HA (OC-097), and FK4QX (OC-032). Francois FT3YL has been active in the late afternoons, mostly on 20 m SSB from the French Antarctic base Dumont d'Urville in Adelie Land. Ted HI3T in Honduras has been very active on 30 m CW. Indonesia celebrated its 72nd anniversary as the Republic of Indonesia with special callsigns "YB72RI/0" through to "YB72RI/9" representing the different districts of the archipelago.

Upcoming DX

DXpedition activity scheduled for October includes the following.

VK9XI Christmas Island (OC-002), 2 - 10 October. Chris VK3FY, Lee VK3GK, Tony VK3TZ, Peter VK3FN, Luke VK3HJ, Dave K3LP, Adrian KO8SCA and Cliff VK9VKL will operate 160 - 10 m, CW, SSB and RTTY, and will be active in the Oceania SSB Contest. QSL via M0OXO. For more information see website: <http://christmascocos2017.vkdxg.com/>

VK9CI Cocos-Keeling Island (OC-003), 10 - 17 October. After the Christmas Island activation, the team will operate from Cocos-Keeling, and will be active in the Oceania CW Contest.

8Q7BI Maldives (AS-013), 7 - 15 October. John MM0VEG will be operating from South Ari Atoll, Machchafushi, on 20 m SSB and possibly PSK. QSL via LotW or Club Log.

A52SJ Bhutan, 12 - 21 October. N6SJ plans activity on 160 m CW. QSL via LotW or Club Log.

S9CQ Sao Tome & Principe (AF-023). Jose EA5IDQ will be operating from Sao Tome Island on 80 - 6 m on SSB and RTTY. QSL via LotW, Direct or Bureau.

S2 Bangladesh, 15 - 25 October. G3KHZ, SM6CVX, G4EDG, DL6KVA, S21ED and S21TV will be activating Bhola Island (AS-140) 15 - 18 October, then St Martins Island (AS-127) 21 - 25 October. These are both rare IOTA, Bhola not active since 2005 and St Martins since 2011. They plan to operate 40 - 15 m, CW and SSB. Dates may

change. QSL via G3KHZ. For more information see website: <http://s21iota.weebly.com/>

FJ St Barthelemy (NA-146), 17 - 26 October. AI5P operating as FJ/AI5P and N0KV, W0ZA and WD0E as FJ/N0KV will be on 80 - 10 m CW, SSB and RTTY. QSL FJ/N0KV via LotW and N0KV, FJ/AI5P via AI5P.

S79KB Seychelles (AF-024), 20 October - 1 November. Kasimir DL2SBY will be operating from Mahe Island, 80 - 10 m, CW, SSB and a focus on RTTY. QSL via LotW or Club Log.

A25A Botswana, 20 October - 5 November. Andre NJ0F will be active for the CQWW DX SSB Contest. QSL via NJ0F.

VK9CZ Christmas Island (OC-002), 23 October - 6 November. Chris GM3WOJ and Keith GM4YXI will be on 160 - 10 m SSB and CW. They will be active for the CQWW DX SSB Contest. QSL via N3SL. For more information see website: <http://www.vk9cz2017.com/>

5L3BI Liberia, 31 October - 4 November. EL2BG, EL2DT, EI5GM, EI9FBB and MM0NDX will activate Baiyah Island (AF-111) for the very first time. They will be on CW and SSB. Dates are tentative. QSL via M0OXO or Club Log. For more information see website: <https://af111new.com/>

Other news

VK9MA Mellish Reef DXpedition

The team for the November DXpedition to Mellish Reef will be in Cairns from 25 October, making final preparations for the trip. They plan to sail on 1 November aboard

the MV Phoenix, expecting to arrive and begin setup on 3 November. The team leader is Rob N7QT, with co-leader Hawk SM5AQD, Dietmar DL3DXX, Morten LB8DC, Brian N9ADG, Eric SM1ALH, Lasse SM5GLC, David W5XU and Dave WJ2O. After studying the needs of DXers worldwide, they plan to focus on data modes, especially RTTY, and possibly JT65, JT9 and FT8. Thirteen days are planned on the islet with four complete stations on air around the clock. The lower bands will be emphasised with 160 - 30 m overnight, and 20 and 17 m during the day. Teardown

and departure is scheduled for 16 November. For more information see their website: <https://vk9ma.com/>

St Brandon Island Dates

The DXpedition team will leave Mauritius for St Brandon on 5 April 2018 and leave St Brandon on 17 April. Keep up with developments at the website: <http://www.saintbrandondx.com/en/>

P5/3Z9DX Fake News

It was incorrectly reported that Dom was preparing for an activation of

North Korea. This was old news of his 2015 activity there repeated. Someone has been playing games on the DX Cluster Network with fake P5/3Z9DX spots in August. Dom 3Z9DX confirms he was at home in Poland.

Please email me with any DX related news for inclusion in this column. I am particularly interested in hearing about DX worked or heard in other states.
vk3hj@wia.org.au

73 and good DX,
Luke VK3HJ



AMSAT-VK

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

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

Website:
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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 Australian National Satellite Net is held on the second Tuesday of the month (except January) at 8.30 pm eastern, that's either 9.30 or 10.30Z depending on daylight saving. Please note we will be taking check-ins from 8.20pm-ish. 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. Operators may join the net via EchoLink by connecting to 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 numbers 9558. 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
VK4RRC Redcliffe 146.925 MHz -ve offset IRLP node 6404 EchoLink 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 2 m. Repeater Stowport 146.775 MHz. IRLP 6616

In the Northern Territory
VK8MA, Katherine on 146.750, CTCSS 91.5, IRLP Node 6800

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.

Silent Key

Graham Iles VK5AT

It is with sadness, that we advise that Graham Iles VK5AT has become a Silent Key.

Graham's history in amateur goes back to the late 1970s where he was a Member of the South Coast Amateur Radio Club, based at

Baden Terrace O'Sullivan Beach.

Many will remember Graham for his professional services in accounting, as their Tax Agent. Numerous of his clients came from the Amateur Radio fraternity, and he will

be sadly missed. On behalf of the WIA (S.A. Division), we send our deepest condolences to Joan, VK5AVJ and her extended Families at this time.

John Lunnay VK5KLJ





VK5news Adelaide Hills Amateur Radio Society

Christine Taylor VK5CTY

The Buy And Sell

Do not miss this important yearly opportunity to meet your fellow amateurs and see what is new in the amateur equipment world.

The date is Sunday 12 November 2017. Yes, it is a little later this year due to other bookings of the Goodwood Community Hall in Maud Street. The doors open into the first hall at 9.00 and into the selling hall at 9.30.

This buy and sell is the social occasion of the year for us all. It is where we see our amateur friends from all over the state. If you are planning a visit to Adelaide this is the very best weekend to come.

Regular meeting night talk

For the August meeting, David Murphy from Krix Loud Speakers gave an interesting talk about Cinema Sound systems. David is a chartered Engineer who has been designing loudspeakers for Krix since 1996. He joined Krix after a career electronic engineering education at Regency TAFE. Prior to that he was a Radio Apprentice, Radio Technician and gained his Electronic Engineering Degree in 1990.

David makes extensive use of CAD and FED and has developed a commercially successful range of acoustic horns and has integrated them into 3 and 4 way cinema systems. He holds Australian and US Patents on aspects of acoustic horn design.

Films are no longer distributed on photographic material; they are distributed on hard disks in digital format with many channels of sound. Krix has been working on supplying cinema speaker systems around the world and we saw some interesting photos of installations. The bass speakers can have one, two or four 18 inch drivers and David's fancy horns on top. There can be up to six of these huge stacks behind the screen.

We are not aware of the complexity hidden behind the blank screen we see when we go to the cinema and the arrays of speakers around the walls and in the ceiling. From the earliest days when a pianist provided the sound to match the action on the screen, there have been enormous changes.

The Shack

The regular uses of the Shack continue with both social and

educational gatherings. Do keep an eye on the website so you are up-to-date with these activities.

Mid-Year Dinners

The decision has been made to discontinue the mid-year dinner, in part because the twice a month lunches at the Blackwood RSL are so well attended but also partly because, for the dinner at Uraidla Hotel, there were at least six people who did not attend and for whom the club had to pay.

That really is most unfair for the club. In future, please make sure you let the organiser know if you cannot attend.

The antenna analyser

We are very pleased that our antenna analyser kits are still so popular. We have orders coming in from all-over Australia and from overseas as well. The dedicated group who deal with these are kept busy. Anyone who would like to make a contribution to the club and to radio amateurs, in general, is welcome to join the group. Contact someone on the committee for details to find out how best you can help.



Silent Key Ian McKay VK2EYC

Ian McKay VK2EYC died on 26 July 2017, two days before his 90th birthday!

Ian McKay VK2EYC really enjoyed being an amateur operator, both here and in South Africa where he obtained his Amateur Radio Station Licence No. 1154 on 15 December 1949, at the age of 22.

In South Africa his call sign was ZS6YC. We have his original Amateur Radio Station Log Book, the first entry was made in

February 1950. We also have a letter from the Postmaster General in South Africa, cancelling his licence (but allowing him to retain the radio apparatus in a dismantled condition!) prior to immigrating to Australia. There are other papers marking special 'contacts', i.e. VK2EYC made contact with VI 75 RAAF during the 75th Anniversary Celebrations, and the 100th Year Centenary 1910-2010. Ian found Amateur Radio a

wonderful hobby and enabled him to make contact with other enthusiasts all over the world. He particularly enjoyed a session about 4 p.m. each day between Australia and South Africa some years back, which enabled him to chat regularly with many of his previous contacts there. It no longer operates.

Alice McKay





Contests

Trent Sampson VK4TS
e vk4ts@wia.org.au

Contest priorities for October 2017

Contest	Date (UTC)	Rules	Difficulty	Software	Modes
Oceania DX Contest Phone	0800Z, Oct 7 to 0800Z, Oct 8	http://www.oceaniadxcontest.com/Rules/ocdxc-2017-rules-1-.pdf	Easy	VKCL N1MM TR4W	SSB
Oceania DX Contest CW	0800Z, Oct 14 to 0800Z, Oct 15	http://www.oceaniadxcontest.com/Rules/ocdxc-2017-rules-1-.pdf	Easy	VKCL TR4W N1MM	CW
CQ WW SSB	0000Z, Oct 28 to 2400Z, Oct 29	www.cqww.com	Easy	VKCL TR4W N1MM	SSB

Just why does a Contest need managers?

Contests are the exchange of a given (usually unknown) piece of information correctly and accurately in the manner required by the various Contests.

People make mistakes and due to various errors people who 'think' they have won are often surprised by the final score.

The final score in most contests is tabulated by the manager, by cross checking the other logs. It is not uncommon to see new contesters lose as much as 10% of the score because they tried to make as many contacts as possible without regards to accuracy.

Common terms used by managers are Busted for incomplete calls, Dupes for duplicate contacts, NILs for Not-In-Log and Uniques – meaning the callsign only appeared in one log.

CQWW lists the log report (UBN) to include

- Scoring summary by band
- List of calls not found in the other station's log (Not in Log)
- List of calls that were cross checked or judged to be incorrect (Bad calls)
- List of calls that only you worked that were not removed from your

- log (Uniques)
- Additional sections may list operating time or band change violations if they exist.
- Multiplier list by band

This is why when the logger e.g. VKCL gives you a score, it is not a cross referenced score and you may find a reduction or in some cases an increase to the claimed score.

If the contest did not cross check you could be in second position by a small margin always wondering whether you were the winner.

Right now, there are moves afoot for even better log checkers. With the Harry Angel, Trans-Tasman and the VK Shires, this is now covered by W3KM's program Cabrillo checker.

All logs are loaded into one PC directory and then they are cross checked against each other; therefore, managers insist on standard files in standard formats – it saves many hours of work. VKCL does this for the most common Australian and DX contests.

Contester of the Month for October is VK2AU

The Fisher's Ghost Amateur Radio Club runs the Ted Powell Memorial

DX Challenge. The contest runs four times per year over 3-month periods.

The objective of the challenge is to work the most wanted DXCC entities over a 3-month period based on their ranking in ClubLog's Most Wanted list, which is published on the contest website. All Australian amateurs are eligible to enter and entering is easy. You don't need to be a serious DXer. If you've worked any DX during the current contest period, head over to www.vk2au.org and submit an entry. The website is tidy and easy to understand. Scroll down to the Entry Submission section where you will find a number of simple ways to submit your entry.

Contest and entry periods are as follows:

Period 1: 1 January – 31 March (Entry submission: 1 April – 14 April)

Period 2: 1 April – 30 June (Entry submission: 1 July – 14 July)

Period 3: 1 July – 30 September (Entry submission: 1 October – 14 October)

Period 4: 1 October – 31 December (Entry submission: 1 January – 14 January)

This is a fun and relaxed challenge where you work DX in your own

time over a 3-month period. It's easy, and submitting an entry only takes a few minutes.

For full details about the contest including rules and entry submission details, check out www.vk2au.org

Who is VK2AU?

VK2AU is the callsign acquired by the Fisher's Ghost Amateur Radio Club. It belonged to former member Ted Powell (SK). It is now used by the club members as a contest call. It gets used mostly when VK2KDP, VK2PR and VK2ND get together for contests at the station the club maintains. It has also been used for some smaller contests from home QTHs.

Favourite Contest?

The CQWW and CQWPX are the two favourite contests. These contests are great for the 48 hr long haul, pushing limits of sleep and operating skill. When conditions are good you can work worldwide and keep very busy. They are good as you have two shots at potential openings on different bands and the chance to work on a good score and operating skills. There is also the friendly competition among us to see who can get the most contacts and the best "runs".

We also enjoy some of the smaller contests like the Remembrance Day contest, John Moyle Field Day and Harry Angel Sprint. These are fun contests that can be a good challenge and can keep you very busy. They are also great contests for new contesters getting their feet wet.

Favourite Rig?

We wouldn't say these are our favourite rigs but they are the ones we currently have. Yaesu FT-3000, FT-2000 and FT-1000. We mainly use the FT-2000. It is a good radio for contesting, especially when

things get slow. We can call CQ using the inbuilt voice keyer and can also Search and Pounce using the second receiver. This feature has helped on some of the VK contests to put in winning scores.

What Modes do we contest in? SSB

Favourite Contest Band and Why?

10 m is lots of fun as it can produce some great runs and some interesting propagation at times. You never know what may happen. We also enjoy 40 m for the runs we can get and the extra points on that band during the world wide contests. 40 m is also the "money band" for the John Moyle and RD contest.

Preferred Software?

N1MM+ for the worldwide contests and VKCL for VK contests.

Favourite Mic/Key?

Just like rigs, not necessarily our favourite, but they are the ones we have: Heil foot switch and Heil ProSet plus headset. The Heil headsets are good as they have the phase reversal switch. This can help at times to better hear the weaker stations. There are newer Heil products on the market, but we are using what we have, while it still works.

"Not so secret" weapon?

Yagi antennas at 22 m above ground at an elevation of 420 m above sea level. The location we operate from is one of the highest in the area and has great take off views in all directions. Our full size vertical 80 m delta loop at 18 m is not great for DX but has put in winning performances in local contests.

Tip for newbies?

Get to know conditions so you can anticipate when the band openings may happen. This can be a

tremendous help to improve scores in worldwide contests and can help in local contests.

We would definitely recommend for anyone wanting to improve contest skills, to get either a headset mic or a boom mic so both hands can be free for logging. Using a hand/desk mic and paper can only get you so far. Practise typing skills and find a logging program that you like for computer logging. A voice keyer can also help save your voice during those extended periods of calling CQ.

Aspirations for contesting?

To win a contest which awards a trophy or plaque? A worldwide first place would be nice, but will probably not happen.

What would you like to improve in skills or station?

A better 80 m antenna for the world wide contests and maybe mono-banders for 10 m, 15 m, 20 m or stacked beams. We would also like to get a second solid state amp for when we do Multi 2 operations.

Contest Terms

Dupe: Duplicate contact

NIL: Not in Log

Busted: incorrect logging

Unique: callsign in one log only

M2: (Multi Two) Multiple operators Two Transmitters

MM: (Multi Multi) Multiple Operators Multiple Transmitters

Lockout: A device that stops multiple transmitters keying at once outside contest rules.

VK4TS Trent is the admin of VK Contest Club (VKCC) web (www.vkcc.com) and Facebook pages and has been an active contester since the 1970s.

Emails can be sent to vk4ts@wia.org.au



Participate

AHARS Hamfest

Keith Roget Memorial National Parks Award

6 November 2016

11-14 November 2016

Remembrance Day Contest 2017

Alan Shannon VK4SN

The Remembrance Day Contest 2017 has successfully passed and although some thought it was quieter this year, a few records have been broken by a dedicated few. The winning State is calculated by Total points from logs submitted divided by the number of licences in each state or Territory (excluding beacons and repeaters as published in the WIA Callbook for that year) and this year the VK7s proved they were worthy of the title once again. Tasmania has won the 2017 Remembrance Day Contest. An excellent effort by the VK7s as 6.3 percent of total licenced operators in that state submitted their log claiming the win hands down. Next best effort was from VK6 with 2.7 percent.

198 logs were received inclusive of 14 paper logs: 166 Advanced, 23 Standard and 9 Foundation making 19.8% of the 993 total participants. CW:SSB is at a respectable 1:9 ratio. RTTY contacts this year were prominent due to a lot of prior chatter on social media and totalled 144 contacts over the 198 logs. No logs were received from VK8 or P2. The standard of logging is outstanding with only five typos in logging over 25,000 contacts. That is brilliant considering only a couple

of years ago some were still learning how to log a portable station correctly. Six logs were classified as check logs due to personal requests, missing and/or incorrect data. Remember, a contest is applying skills in accurate message taking and logging. It is never the job of a manager to fix your log, although they do tweak a few to get you through.

Records broken were from

VK2GR in SOCW with 758 points, VK5LJ in SO Mixed with 1036 points, VK2TUV in MS with 1322 points and VK6NC with an outstanding 1437 points for the Multi-Multi section.

Comparing results for each state can be done using Table 1 below.

The club scene for 2017 was a lot quieter than previous years. 51 operators were spread over eight Multi-Single and five Multi-Multi

Photo 1: VK2JDS and crew, part of the VK2TUV team setting a new Multi-Single record.



STATE	NR of LOGS	LOGGED CONTACTS	PH	CW	RAW SCORE	WEIGHTED SCORE	Unique Participants
VK 1	3	170	155	15	207	0.55	10
VK 2	44	6645	5361	1284	10786	2.67	240
VK 3	36	3397	3129	268	4888	1.24	243
VK 4	14	2889	2699	179	3752	1.37	125
VK 5	24	2861	2516	335	4087	2.89	123
VK 6	36	4350	4282	68	5443	4.11	98
VK 7	38	4550	4183	232	6906	11.38	107
VK 8	0	0	0	0	0	0.00	0
ZL	2	26	22	4	30	0.01	47
P2	0	0	0	0	0	0.00	0
TOTAL	197	24888	22347	2385	36099	TOTAL	993

Table 1: Results summary.



Photo 2: VK3TST Portable.

stations. The QRP section was represented by 13 log submissions which were seven down on previous years. Poor conditions will make it harder for QRP stations to be heard during low sunspot activity, which was very evident to me. While operating I asked "is this frequency in use?" upon which I received a reply from a weak QRP station saying it was his frequency and nothing was happening. I worked the station and the frequency was given over to me. I then worked 34 stations in 20 minutes. Dare I ask in jest, "Is life too short for QRP?"

The highest scoring Rookie goes to VK3FMFB with 165 points in the Single Op Phone section. The top three Foundation licensees were VK3FMFB with 165 points (SOPH), VK2FHRK 150 points (QRP PH), and VK4FILS 70 points (SOPH).

Three teams were submitted with team AREG Team 1 (VK5QI, VK3TST, VK5GR) taking the lead with 1633 points. Table 2 below has all the results.

Good news is imminent for log scoring and evaluation to take the load off the managers. This year uploading logs to the web based

server was used to check scoring and duplicates. Immediately after logs can be manually viewed and another page shows the results listed in category order. So far the system is working perfectly. By next year we hope to have statistics automatically generated which will relieve the manager of about five or more days work. Once the project is finished and tested, each operator will be able to upload their own log. Other contests can be added if other managers are interested. This is an Australian-based initiative and is not a WIA project.

TEAM NAME	CALLSIGN1	SCORE	CALLSIGN2	SCORE	CALLSIGN3	SCORE	TOTAL
AREG TEAM 1	VK5QI	309	VK3TST	321	VK5GR	1003	1633
NSW Wombats	VK2GR	758	VK2BJ	524	VK2WQ	340	1622
31 CLUB	VK6AXB	431	VK6BDO	242	VK6ZRW	582	1255

Table 2: Teams results.

A full list of statistics, photos and other information will be available on the WIA RD website in PDF format. Awards will be sent from the WIA office for all major 1st, 2nd, and 3rd place winners. Downloadable PDF certificates for individual state placing will be available. See below for full list of scores.

Best 73

Alan Shannon VK4SN



2017 Remembrance Day Contest Results

SINGLE OP PHONE						SINGLE OP CW		QRP PHONE	
Callsign	Points	Callsign	Points	Callsign	Points	Callsign	Points	Callsign	Points
VK2MT	974	VK1DW	103	VK5HAE	30	VK2GR	758	VK2AOJ	419
VK3XV	625	VK2DEK	102	VK7CL	28	VK2BJ	524	VK3TST	321
VK4ADC	540	VK2VV	95	VK3DY	27	VK2WQ	340	VK2FHRK	150
VK7VH	478	VK6AN	80	VK3FLCS	26	VK7RD	222	VK2YW	95
VK6AXB	431	VK6TV	80	VK5DJ	26	VK5NE	212	VK7TW	93
VK7HW	407	VK6ADI	78	VK4FPDG	26	VK2KJJ	208	VK5MTM	64
VK7JGD	364	VK2QV	75	VK7SA	25	VK2EL	154	VK3OAK	42
VK6CSW	344	VK1HW	74	VK5SE	24	VK7AD	114	VK3SMC	13
VK7DIK	337	VK4FILS	70	VK6QK	24	VK6AAK	108	VK7FREU	11
VK5QI	309	VK7DG	70	VK7GG	24	VK1FWBK	30		
VK4PDX	283	VK6JP	69	VK2YX	23	VK2BJT	26	QRP CW	
VK3LM	275	VK2JCC	64	VK5KDK	22	VK7RO	20	VK2IG	170
VK7OO	275	VK2TTL	60	VK7WH	22	VK2PN	2	VK3AGQ	88
VK2BGL	260	VK6ZIC	59	VK7DC	22				
VK4NM	244	VK3MCD	55	VK2VOL	21			QRP MIXED	
VK6BDO	242	VK6BMW	55	VK3LCW	20	SINGLE OP MIXED		VK7NTK	380
VK3AVV	235	VK2UVP	55	VK3VGB	20	VK5LJ	1036	VK3YE	102
VK5DT	220	VK4LAT	54	VK5HEL	20	VK5GR	1003		
VK5KX	220	VK6FGGL	53	VK6JY	20	VK2AZ	778		
VK7QF	212	VK6ZMS	53	VK3JWT	19	VK2CU	726	MULTI-SINGLE	
VK7KAJ	198	VK7DW	52	VK5KIK	18	VK7ZBX	718	VK2TUV	1322
VK7RM	187	VK5MCB	50	VK6LO	17	VK7ZMS	689	VK2AU	1178
VK6QS	183	VK2ZCM	45	VK7TU	17	VK6ZRW	582	VK3CML	629
VK6VP	183	VK5XY	45	VK7PD	16	VK7HDM	573	VK2GGC	537
VK3FMMB	165	VK7BG	45	VK5PL	15	VK7BEN	536	VK4BW	214
VK7IF	161	VK2HHS	44	VK2HAX	15	VK3SIM	532	VK6ARN	197
VK6DDX	146	VK2PX	44	VK2UTL	14	VK4SN	462	VK5PX	115
VK3JK	143	VK6SO	43	VK5UE	14	VK3AMG	340	VK5BRL	108
VK7ZGK	142	VK3TNL	42	VK6SN	12	VK4SC	303		
VK5JW	141	VK7JU	41	VK6CG	11	VK2BPL	299	MULTI-MULTI	
VK3LRE	139	VK4FLR	40	VK6AIF	9	VK3AUQ	258	VK6NC	1437
VK6MM	138	VK6MJC	40	ZL1SHP	9	VK6GHZ	201	VK4HH	916
VK7FB	134	VK7KC	39	VK6HV	8	VK3AWG	181	VK2AWX	753
VK3ADW	133	VK2MK	38	VK2BBQ	6	VK3ELH	173	VK5GRC	241
VK7ZCR	131	VK3AMW	37	VK2HEK	2	VK3VT	165	VK6WH	91
VK2TS	124	VK5KLD	36	VK7EV	2	VK6RC	158		
VK6WE	124	VK3FI	35	VK2XSE	1	VK4TMZ	155	CHECK LOGS	
VK6USB	122	VK6NK	34			VK2JDR	109	VK2HEL	
VK3ASU	121	VK3MEG	34			VK3WE	81	VK2EMU	
VK5LA	112	VK6EK	34			VK6NU	74	VK7HSL	
VK7QP	111	VK3NCC	32			VK2BFC	71	VK4AAN	
VK3MHY	111	VK5AZL	31			VK3ZAP	37	VK3FBNR	
VK2LEE	105	VK7KW	30			VK3GK	36	VK2FF	
VK4ADF	105	VK3ZPF	30			ZL2AQL	21		

VK3news Amateur Radio Victoria

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Historic maritime navigation aid gets an airing

A team of four operators, plus two others to answer public inquiries, put the Timeball Tower at Williamstown on air for the 20th International Lighthouse and Lightship Weekend.

Despite some cold and squally conditions, particularly on the Saturday, the team from Amateur Radio Victoria braved the elements.

Under the callsign VK3WI at Point Gellibrand, it logged 182 stations on Saturday 19 and Sunday 20, which included 26 other VK registered participants in this fun event, including The MV Cape Don Lighthouse Supply Ship VK2AEJ and five lighthouses in New Zealand.

Western & Northern District Amateur Radio Club members Ian VK3LA, John VK3JNF and Terry

Williamstown Timeball Tower.

VK3TEZ joined Tony VK3XV across the weekend. They used an Elecraft K3 Transceiver running 100 W with a matching P3 Panadapter, feeding a 40/20 m end fed in an "Inverted L" configuration, hoisted up by a 15 m tall "Spider Beam" pole.

This was tied off to a historical display "Fluke" anchor, formerly used to secure one of the five prison hulks moored off Williamstown in the mid-1800s.

The antenna was new to the site and performed as well as the previous inverted vee dipole and took much less time to get up and running.

VK3WI worked throughout Australia (except VK9/VK0), with DX on 20 m being from the USA, Cook Islands, Dominican Republic, Japan, Italy, New Zealand and Montserrat. Each will receive a QSL card via the bureau.

On the Sunday a strong noise level appeared during a QSO. Then it was observed to be about 1 pm when the tower lifts a spherical ball aloft and drops it so marine chronometers can be set. This timepiece is a precise and accurate portable time standard, so ships could determine longitude by means of celestial navigation.

Interested visitors to the ILLW event heard what the event was all about, talked about the history of the structure and all left knowing more about Amateur Radio and the Timeball. Another year of success for VK3WI and it has registered to do it again in August 2018.

The World Digital ATV QSO Party

This annual event that began with our century in 2011 again saw plenty of support and activity. It was



held on the Friday & Saturday, 25 and 26 August 2017.

Peter Cossins VK3BFG reported that on Friday there were stations from VK4, VK5 and VK2 participating.

A feature of the night was relayed contacts through the Sydney ATV Repeater VK2RTS. Thanks go to Gary VK2CRJ for coordinating those contacts.

A number of Melbourne stations were not available this year, in particular Jack VK3WWW at an International Foxhunt event and Ralph VK3LL in a new job that took him overseas.

Special thanks also go to David VK5DMC in Port Pirie and Richard VK4XRL in Brisbane. Saturday started early at 10 am with contacts via the Columbus Ohio DATV Repeater WR8ATV.

The anchor was Art WR8RMC, well known as the hardware designer of the popular DATV Express DVB Exciter. Arrangements for contacts into Southern California

this year were last minute due to business commitments of the people there.

The new anchor this year was Roland KC6KPG who has an amazing system of linking many ATV Repeaters in California and Arizona.

His studio looks like a professional TV station and he has a personality to match. He was taking in the signals from VK3RTV very successfully with quite reasonable quality, but unfortunately when it was the turn of the Californian stations, we did not receive the associated audio with the video.

A quick suggestion from John VK3ATV locally suggested we pick up the stream from the British Amateur TV Club. The morning and early afternoon was a success overall with the potential of developing the contact with Roland for further events.

The mainstay of the activity has been the VK3RTV repeater, first licensed in September 1978.

At the time of writing it was not

clear that VK3RTV would vacate its site in September, having been postponed already from April. However experimentation and tests will be conducted at two possible identified sites.

Entry level licence weekend

Amateur Radio Victoria has long been a leader in education with many of today's radio amateurs attending one of its training classes.

It is holding an entry level Foundation licence weekend on October 28-29 2017. It covers the theory and regulatory knowledge needed, plus a practical test which includes hands-on setting up, testing and operating a station.

The sessions run by experienced trainers are at 40G Victory Boulevard, Ashburton in Melbourne's east. To enrol, please contact the Education Team Leader, Barry Robinson VK3PV via email foundation@amateurradio.com.au or phone 0428 516 001.



ADELAIDE HILLS AMATEUR RADIO SOCIETY

2017 BUY and SELL Sunday 12th November

Doors open 9.30am

RADIO and ELECTRONICS SALE

Goodwood Community Centre, Rosa Street, Goodwood S.A.

PRIVATE AND CLUB STALLS - COMMERCIAL VENDORS - DOOR PRIZES

ALARA BREAKFAST - TALKS AND DEMO'S - BBQ - COFFEE LOUNGE

Private tables \$10- Clean up your shack now!! Bargains Galore!! Entry \$5 includes 2 raffle tickets

INFORMATION AND TABLE BOOKINGS

Contact Roy Gabriel VK5NRG Phone: 0438 362 049 Email : vk5nrg@wia.org.au

Biggest and best in OZ- worth an interstate trip!

Participate

BARG Hamvention 2017

Sunday 5 November 2017

SOTA & Parks

Allen Harvie VK3ARH

Logging

Whilst not required as a condition of the Amateur licence, maintaining a valid log is still a key component of our hobby. Logging can be done by paper or electronic means.

Personally I use a combination of both. Will use paper logs on SOTA activations, and electronic logs on WWFF or whilst chasing from home.

There have been conversations on air and within the various groups as to confusion around the various logging processes, so believe it is timely to readdress this

important topic. Also I have been reviewing the process and formats whilst developing applications and routines to assist with my own logging tardiness.

The format for exchanging logged information is Amateur Data Interchange Format (ADIF), of which the current release is ADIF V 3.0.6 (http://www.adif.org/306/ADIF_306.htm). Initially released in 1996, it has been adopted by a variety of Amateur programs as the uniform format for exchanging logs between amateur radio enthusiasts (logging

software, award schemes, callsign lookup and mapping sites).

Comma separated values (CSV) is the other common format for log files. CSV is easier to use initially as it can be modified with spreadsheet or, for the brave, by a text editor. It is a rigid format that requires data in defined layout and type. With a CSV file you have to ensure the fields are present in the correct order whilst an ADIF file can have additional fields which are simply ignored by the processing program.

ADIF File Example

An ADIF file is essentially a text file containing an array of fields defined as <FIELD:length> value with a header and then QSO records:

```
<ADIF_VER:5>3.0.4<PROGRAMID:22>VK3ZPF - VK port-a-log<PROGRAMVERSION:11>20170527_04<EOH>
<QSO_DATE:8>20170527 <TIME_ON:6>052651<CALL:8>VK4AAC/2
<BAND:3>40M <MODE:3>SSB <OPERATOR:6>VK3ZPF <STATION_CALLSIGN:8>VK3ZPF/P<MY_SIG:4>WWFF
<MY_SIG_INFO:9>VKFF-0753<SIG:4>WWFF <SIG_INFO:9>VKFF-0563<EOR>
```

Core Fields Required

- STATION_CALLSIGN (callsign used by the activating station)
- OPERATOR (individual operator who made the QSO)
- CALL (the full callsign of the hunter)
- QSO_DATE
- TIME_ON
- BAND
- MODE
- RST_SENT
- RST_RCVD
- COMMENT

Following ADIF fields are expected to support WWFF activities:

- MY_SIG (Activator specify "WWFF")
- MY_SIG_INFO (Activator WWFF ref "VKFF-0003")
- SIG (P2P or Hunter specify "WWFF")
- SIG_INFO (P2P specify the Hunter ref)

Plan Ahead



JOTA/JOTI | 20-22 October

CSV File Examples

A CSV file is essentially a text file containing information separated by commas:

WWFF

- stationCall,operatorCall,reference,qsoDate,qsoTime,qsoBand,qsoMode,hunterCall,EOR
- EOF

Example of WWFF activation: VK3ARH@VKFF-046120170227.csv

```
stationCall,operatorCall,reference,qsoDate,qsoTime,qsoBand,qsoMode,hunterCall,hunterRef,EOR
VK3ARH,VK3ARH,VKFF-0339,20170310,222733,40M,CW,VK7CW,,EOR
VK3ARH,VK3ARH,VKFF-0339,20170310,223830,40M,CW,VK2IO,,EOR
VK3ARH,VK3ARH,VKFF-0339,20170310,224700,40M,CW,VK2GAZ,,EOR
VK3ARH,VK3ARH,VKFF-0339,20170310,225145,40M,CW,VK3BYD,VKFF-0742,EOR
VK3ARH,VK3ARH,VKFF-0339,20170310,225615,40M,SSB,VK5WG,,EOR
EOF,,,,,,,,,
```

SOTA

- V2Flag,Your Callsign,Your Summit,Date,Time,Band,Mode,Their Callsign,Their Summit,Notes or Comments

Example of SOTA file containing chaser then activator entries:

```
v2,VK3ARH,,25/04/2017,6:58,7MHz,SSB,VK2IO,VK2/MN-046,S57 R59
v2,VK3ARH,VK3/VW-010,26/04/2017,5:18,7MHz,SSB,VK3PF,,S57 R55
v2,VK3ARH,VK3/VW-010,26/04/2017,5:19,7MHz,SSB,VK5WG,,S59 R57
v2,VK3ARH,VK3/VW-010,26/04/2017,5:21,7MHz,SSB,VK7DW,,S59 R57
```

So why does a portable operator care as to logging file formats, as the common phrase goes, “The Job Isn’t Finished till the Paperwork is Done”. Accurate logging and then submitting of the logs is a crucial component of activations.

There are several applications that support our award schemas that provide either ADIF or CSV exports suitable for submission as well as templates and tools to convert between the formats.

Logging applications

- VK port-a-log, VK3ZPF is an Android logging and spotting app
- SotaLog, HB9TVK all platforms (https://sota.hb9tvk.org/?page_id=744)
- LOG4OM, IW3MHM Windows (<http://www.log4om.com/dll>)
- Fast Log Entry, DF3CB SOTA & WWFF Windows - (<http://df3cb.com/fle/>)
- And the Next release of Parks&Peaks for iOS from Sue VK5AYL (<https://www.vk5ayl.com/>)

CSV Spreadsheet templates

- SOTA CSV template available from VK SOTA Yahoo Group: https://au.groups.yahoo.com/neo/groups/sota_australia/info
- WWFF CSV template available from VKFF site: <http://www.wwffaustralia.com/csv-template.html>

Conversion tools

- Parks&Peaks Tools – VK3ARH - <https://parksnpeaks.org/viewTools.php>
- ADIF2 SOTA ON6ZQ Windows <http://www.on6zq.be/w/index.php/SOTA/ADIF2SOTA>
- MLDX->SOTA KI4SVM - <https://smkymtns.com/sota-resources/adif-sota/35-mldx-sota.html>

The easiest way is to use an application designed for portable activities at the time of activation. Typically, this is Peter VK3ZPF’s VK port-a-log on Android device, with Sue’s VK5AYL Parks&Peaks on iOS a new player.

ADIF is the standard for amateur logging so if your logging software does not support ADIF then

consider asking the developers to include it. Both the SOTA and the fields used by the WWFF program (SIG) are defined in the current standard.

Log submission

SOTA Process

With SOTA both the activator and the chaser submits logs. It is important to submit your log so that your chasers or activators, can confirm that contacts were made. Submitting SOTA contacts involves submitting your contact log to the SOTA Database system. www.sotadata.org.uk

The SOTA Database is separate site to SOTAWatch. SOTAWatch shows the current and upcoming activity whilst the SOTA database site keeps track of the scores for the participants supporting award recognition.

To submit your results, you log into the site, go to the Submit Log menu and choose either Submit Activator Entry or Submit Chaser Entry. You can either enter each contact using the web interface

or submit a CSV file containing multiple entries.

The use of a CSV file is the best way to submit entries for SOTA activations. The latest (V2) format allows a single file suitable to upload as a Chaser, Activator or Summit To Summit (S2S) log. You can also batch up a couple of days of chasing and the results from weekends activations and submit. The one file, two uploads is the second easiest method to use. The system responds accordingly.

Once you have a CSV file ready, simply submit it through the "Upload Activator CSV/TSV File" menu. This will pick out any activator entries including S2S. If you only had activation records with no chaser or S2S entries, then you can stop at this point but if you do then run the EXACT SAME file through the "Upload Chaser/S2S/SWL CSV/TSV File" menu. This will pick out the simple chaser entries and the S2S entries.

In each case the entries which are not valid for that process will be ignored. Only S2S entries will be processed through both runs. You can now go and check your status and standing in the SOTA database. Also check your advanced status and note the verified flags.

WWFF Process

For the WWFF program, only the activator submits logs. Chasers can check what has recorded to them by going to the WWFF site (<http://wwff.co/>) login in then selecting Logsearch (<http://wwff.co/logsearch/>). Select Hunter to see their results but again only the activators submit logs.

As an activator once you have completed your activation and recorded your contacts in your logging software, you will then send the log to Paul VK5PAS

(VKFF National co-ordinator) at vk5pas@wia.org.au

Your log can be either ADIF (<http://www.wwffaustralia.com/adif-files.html>) or CSV (<http://www.wwffaustralia.com/csv-template.html>) file.

The log file must be named as follows: activatorCallsign@WWFFIDDateTime.csv

Example: *VK5ABC@VKFF010120150630.csv*

where:

VK5ABC - Activator Callsign

VKFF0101 - ParkID

20150630 - Date Time stamp

(YYYYMMDD)

Note: The WWFFID of the park processed is used to name the file for single activations as multiple activations in the same ADIF file are supported by use the keyword "Various" for the ParkID reference in the filename.

Example: *VK5ABC@VARIOUS20150630.adf*

Follow the format described to ensure successful processing and check your log for accuracy before sending them to VK5PAS. Use CheckADIF Tool on Parks&Peaks (<http://parksnpeaks.org/checkADIF.php>) to verify before submitting. Many logs have been submitted with basic errors, e.g. wrong references, incomplete or inaccurate call signs or not in the correct format. The check process will highlight such errors saving time for both Paul, the local WWFF sys-admin, and you, the activator by avoiding rework.

Even if you don't reach the required 10 (VKFF) or 44 (WWFF) QSOs, still forward your log so the stations that did work you will be able to claim the park towards their Hunter statistics. This will also avoid submitting the same contacts twice as they will show up as duplicates in

the WWFF Log Search system again requiring sys-admin time to correct.

If you activate the same park over a period of days, you do not need to send in separate logs for each day. One log for the activation will suffice. So if you are lucky to have gone away for 3 or 4 days on a park expedition and activated 6 different parks, one ADIF file or CSV file is all that is required.

So in short the easiest way to ensure that you stay on top of the logging daemon is to use an application designed for task and submitting as soon as possible after the activation. We are fortunate to have two local products just for the task:

- VK port-a-log for Android from Peter VK3ZPF (<http://www.vk3zpf.com>)
- Next release of Parks&Peaks for iOS from Sue VK5AYL (<https://www.vk5ayl.com/>)

Don't forget the following upcoming weekends:

Friday November 10 - Monday November 13 is the annual KRMNPA activation weekend.

In 2016 we managed the record result of 41 VK3 National Parks "On The Air". This year given the greater interest in parks we should be able to get all 45 on over the weekend.

Contact Tony VK3XV on vk3vth@wia.org.au to be added the Activations to the list. Remember all 45 VK3 National Parks are also eligible for the VKFF Award!

Saturday 25 - Sunday 26 November 2017 is the annual VKFF Activation Weekend.

If you do intend to activate a park that weekend, please drop Paul VK5PAS an email at vk5pas@wia.org.au with your intentions, so you can be placed into the activator spreadsheet.

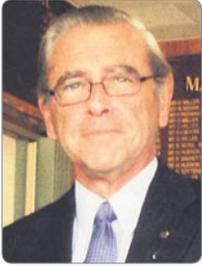
73, 44

Allen VK3ARH



Participate

The Rosebud RadioFest | Sunday 12 November 2017



VK3news Geelong Amateur Radio Club

Tony Collis VK3JGC

The New GARC Executive

At the recent Geelong Amateur Radio Club AGM the following Executive roles were appointed:

President	Lee de Vries	VK3PK
Vice President	Tony Collis	VK3JGC
Secretary	Peter Andjelkovic	VK3KP
Treasurer	Russell Shaw	VK3KRS

The supporting Committee was established as six members: Nick VK3TY, Dallas VK3DJ, Alan VK3LCD, Barry VK3SY, George VK3AGL and Calvin VK3ZPK.



Photo 3: President Lee VK3PK.

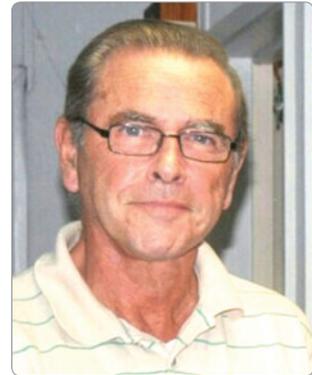


Photo 4: Vice President Tony VK3JGC.



Photo 1: President Lee VK3 PK with Peter VK3WK at the presentation.



Photo 5: Secretary Peter VK3KP.



Photo 2: Presenting The Ray Cowling Award to Bert VK3TU for Services Rendered.



Photo 6: Treasurer Russell VK3KRS.



Photo 7: Garry VK3VLA accepting the bouquet on behalf of Vanessa VK3FUNY.

Life Membership

During the course of the AGM and in line with the constitution, Life Membership of the Geelong

Amateur Radio Club was conferred on Peter VK3WK for his enormous and continuing contribution to the club.



The Ray Cowling Award

President Lee VK3PK then presented the Ray Cowling Award to Bert VK3TU for the individual that club members voted “has contributed the most to Amateur Radio and the GARC in the preceding year”.

In recognition of the work carried out by Vanessa VK3FUNY in the maintenance of the Club House at Storrer Street and ensuring an adequate supply of tea, coffee, soups and soft drinks for the members over several years, President Lee VK3PK handed a “Thank You” bouquet of flowers to husband Garry VK3VLA, as Vanessa was not able to attend the AGM.



Ballarat Amateur Radio Group Inc. (BARG)

HAMVENTION

Sunday 5 November 2017

At the Ballarat Greyhound Racing Club's Function Room, Rubicon St. Redan, Ballarat

Display and Sales

Traders \$6.00 per person, Trade Tables \$10.00
(Space for 70+ tables, this is the big one!)

General Admission \$ 6.00 (under 15 free)

STRICTLY 10:00 AM START

Food and drink will be available on the premises

Enquiries To:

Roger VK3ADE Email: hamvention2017@barg.org.au
or BARG on the web www.barg.org.au

WIA Contest Website



To keep up to date with all of the major Australian contests, including rules and results, at the WIA Contest Website at:

www.wia.org.au/members/contests/about



VHF/UHF - An Expanding World

David K Minchin VK5KK

Introduction

This month we have Leigh VK2KRR's regular WSPR report as well as details of the new 3.4 GHz VK EME record. We also have a section on 1296 MHz Power Amplifiers as well as Kevin VK4UH's regular Meteor Scatter Column.

WSPR August 2017 Propagation Report

Leigh Rainbird VK2KRR reports on WSPR activity for July and August 2017 ...

"This edition will briefly catch up on activity for July and run through any happenings for August. Both months were unusually quiet for tropospheric ducting. As explained in previous columns we can get some extremely solid Tropo openings in winter but sadly this winter didn't provide much at all for us to get excited about. Looking ahead now as the days become longer, we will be looking out for the first summer style opening for the season. Sporadic E showed the usual 'sporadic' wintertime activity on 6m. The most distant path on 50 MHz was via Sporadic E between VK6JJJ and VK5PW at 2920 km. The most distant path on 144 MHz was via Tropospheric Ducting between VK1KW and VK5GF at 945 km. The most distant path on 432 MHz was via Tropospheric Ducting between VK2KRR and VK5ZEA at 1018 km."

"50 MHz WSPR: Just brief summaries for July as I can't access all records from the WSPR database. In the afternoon of 7 July, sporadic E signals were up. Paths were observed from Hobart to Sydney,



Photo 1: VK6JJJ's antennas on the deck of the Gas platform.

Sydney to Melbourne, Melbourne to Brisbane, Brisbane to Adelaide and Sydney to Adelaide. Some of the stations involved were VK7HH, VK7ZCR, VK4SC, VK5KAA, VK2ZMT, VK2EFM, VK2HC, and VK3SMC."

"Afternoon of 10 July saw Es signals around 2 pm, followed by another opening at sundown to 2 hours after sunset. Paths were from Townsville to Melbourne and Adelaide, Roxby Downs to Sydney and Wagga, and Sydney to South Island New Zealand. Stations involved were VK4TVL, VK3SMC, VK2HC, VK2KRR, VK2EFM, VK5MR, VK5KAA, ZL3TKI, and ZL4LV. Morning of 16 July there was an E opening before lunch across

to north island of New Zealand, which included stations ZL2IT, ZL2AKI, VK2HC, and VK2EFM. The distance was around 2300 km."

"On the afternoon of 18 July, a north south path opened from Townsville to Wagga, Canberra and Sydney areas, involving VK4TVL, VK1KW, VK2HC, and VK2KRR. Range around 1800 km. Morning of 23 July saw a brief E opening from Adelaide to Sydney areas, with VK5KAA to VK2HC and VK2ZMT, around 1200 km."

"Now into August, first up on 2 August we have an E opening to the north island of New Zealand from Sydney and

Canberra, with ZL2WHO, ZL2IT, ZL2ET, VK2EFM, VK2HC, VK1KW decoding signals out to 2300 km."

"On 7, 8 and 9 August, E paths existed from Townsville to Adelaide, Roxby Downs and Sydney. Also Roxby downs to Canberra, Wagga, Sydney, and Adelaide to Brisbane. Stations involved being VK4TVL, VK4MIL, VK5MR, VK5KAA, VK1KW, VK2HC, VK2BMU, and VK2KRR."

"An rare, unusual path occurred on 27 August, where we had Craig VK6JJJ running 6m WSPR from his work site aboard a production gas platform near Browse Island, 460 km north of Broome (see Craig's QRZ page for more information). Craig's station consists of a Flex 6500 radio to a Diamond half wave vertical for 6 m."

"Craig's 6 m WSPR signal was heard by Andrew VK5MR at Roxby Downs, and also Peter VK5PW near Adelaide from 0642 UTC to 0846 UTC on the 27th. The signal peaked at -3 dB to Andrew and distances were 2433 km and 2920 km."

"**144 MHz WSPR:** The Tropospheric openings over July and August were few and far between. One that I am aware of in July was the evening of the 28th. Limited information for this one, but there was an east west path with VK1KW in Canberra being heard by VK5GF at Victor Harbour @ 945 km. VK2KRR was also swapping signals with VK5GF @ 763 km with reports at least up to +14 dB. I believe the path was also good from Melbourne to Adelaide area with VK3DXE reporting good conditions to VK5GF @ 644 km."

"On 25 August an excellent path opened for a few hours post sundown. Initially noted by signals intensifying between VK5GF at Victor Harbour and VK2KRR near Wagga, which eventually reached +10 dB over 763 km. VK2KRR was also able to be decoded by VK5ZEA at Port Lincoln on 70 cm WSPR @ 1018 km, with only 20 watts. Signals peaked at -16 dB. As an interesting comparison, Phil VK5AKK atop the Adelaide hills was also monitoring 70 cm WSPR. Phil is on the same beam heading as VK5ZEA except a little closer at 758 km and was able to report signals up to +11 dB from VK2KRR. The following morning on the 26 August, Rob VK1KW was able to reach across to Jeff VK5GF on 144 MHz with QRO transmissions from Rob giving around -20 dB reports @ 945 km. A good effort out of Canberra."

"KH6HME 70 cm WSPR beacon, high up in Hawaii, has been heard several times over 4000 km during July and August, most often by Chris N3IZN, south of Los Angeles. Dates the beacon was heard are as follows, July 7, 20, 21, 29. The beacon was also heard on 10/11/12 August by both W6IT and N3IZN."

All contributions on propagation and WSPR are welcome; just email

Leigh VK2KRR at vk2krr@wia.org.au

New 3.4 GHz EME Record

Charlie VK3NX has extended the 3.4 GHz VK National EME record to 17263.8 km working GB6GHY on 28/08/2017. Charlie VK3NX using 100 W to 3.7 m dish with circular polarised feed scaled from a RA3AQ design. GB6GHY was using 50 Watts into the 32 metre dish at the Goonhilly Earth station facility in Cornwall. This was a special weekend activation at the facility with Brian Coleman G4NNS as the main operator. Noel G8GTZ, Neil G4LDR and Tim G4LOH also assisted.

In other news, Rex VK7MO/6 will make an attempt to gain the 10 GHz EME World distance record portable from SW VK6 over the 9/10 September weekend.

1296 MHz amplifiers

It all started with some discussions around increasing the power output of the current crop of low power 23 cm transverters to 100 Watts or more for Tropo or maybe EME use. For example MiniKits have had a series of transverters; the current release EME227-23cm has a nominal 100 mW. Another popular 1296 MHz transverter comes from Poland (www.sg-lab.com) that produces around 2 Watts.

Increasing the power level to about 10 Watts is fairly easy using an amplifier with a Mitsubishi RA18H1213G module (MiniKits).

That module, like its predecessor the M57762, will produce 15 - 18 watts from 40 mW drive. Obtaining 50 more watts is a somewhat different and more complex story.

Amplifier devices for power levels >20 Watts present a few challenges as there are very few devices actually designed to operate at 1296 MHz at this power level. Early experiments mostly used 900 MHz power devices intended for AMPS Mobile base stations. The amplifier itself was usually of no use higher in frequency but the devices could be mounted on a new PCB and carefully tuned/snow flaked. A supply of a few spares was almost mandatory as few survived a mismatch accident!

Some the newer LDMOS 900 MHz devices do work much better on 1296 MHz. One example is the MRF9045, a 45 Watt device that still has plenty of gain at 1296 MHz. John G4BAO produced a design and some kits a few years ago (Google G4BAO 1296). I have one that I use after a SG-Labs 23cm transverter, about 1.5 Watts is all that is required to get 45 Watts output. These devices (and others) transition from "eWaste to eBay" often in complete modules that now sell for just \$10 - \$30. Look out also for MRF9030 (30 W), MRF9060 (60 W) and MRF9120 (120 W) all have potential at 1296 MHz but wouldn't they be great if we had a 900 MHz allocation?!

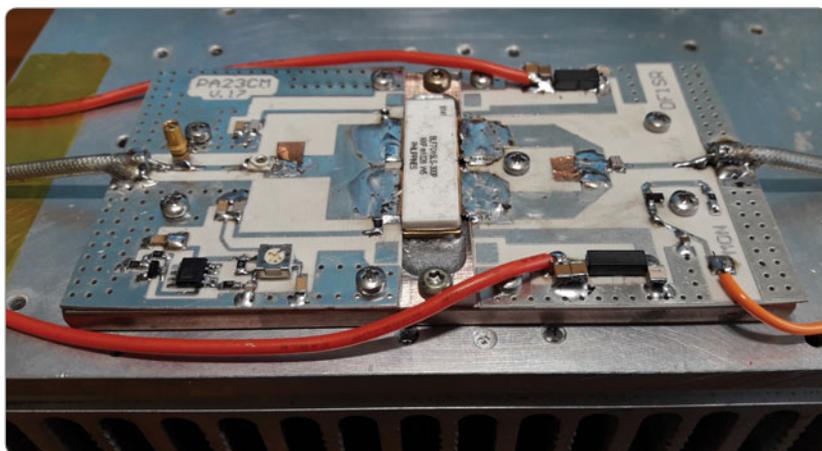


Photo 2: 300 Watt 1296 MHz Amplifier using a BLF7G15LS-300P.

More recently we have seen a far wider range of higher power LDMOS devices intended for 1500 - 2100 MHz with half octave S-parameters and better mismatch tolerance. The most popular device is the MRF286 or XRF286 that has inspired a number of PA designs from PE1RKI, W6PQL and number published in DUBUS. The device itself is nominally rated at 60 Watts at 2 GHz but has S- parameters from 1000 - 2500 MHz and a Psat of 75 Watts at 1296 MHz. There are various single (75 W) or double (150 W) ended PCB designs around, if you want incrementally more power you can then combine two (300 W) or four (600 W) modules through hybrid combiners. Unfortunately the complexity more than doubles each time you double power and combiners easily burn out under mismatch conditions.

Sourcing “genuine” MRF/ XRF286s can be an interesting challenge. Plug that code into eBay and you will get multiple hits from all over the place with new, “counterfeit” or second hand devices ranging from \$9 up! Many of the cheaper devices will be low spec/factory rejects or maybe just 900 MHz devices rebadged! A quick test is to see if you can rub the type number off! The secondhand ones are probably a good bet as they have been removed from equipment that worked to specification once. The only issue is whether the device was (or was made) dead when it was removed. Thankfully a reliable source of devices has come from pre-owned 2 GHz amplifier modules. Search for “Pyrojoe” or “Spectrian” on eBay, Joe has been slowly (+10 years!) been emptying his garage full of Spectrian 2 GHz amplifiers. You can buy individual modules with either one or two devices.

More recently even higher power devices have been turning up in eWaste as W-CDMA base stations are pulled out overseas. 200 - 350 Watt 1.5 GHz LDMOS devices are now appearing even on eBay although the same caution

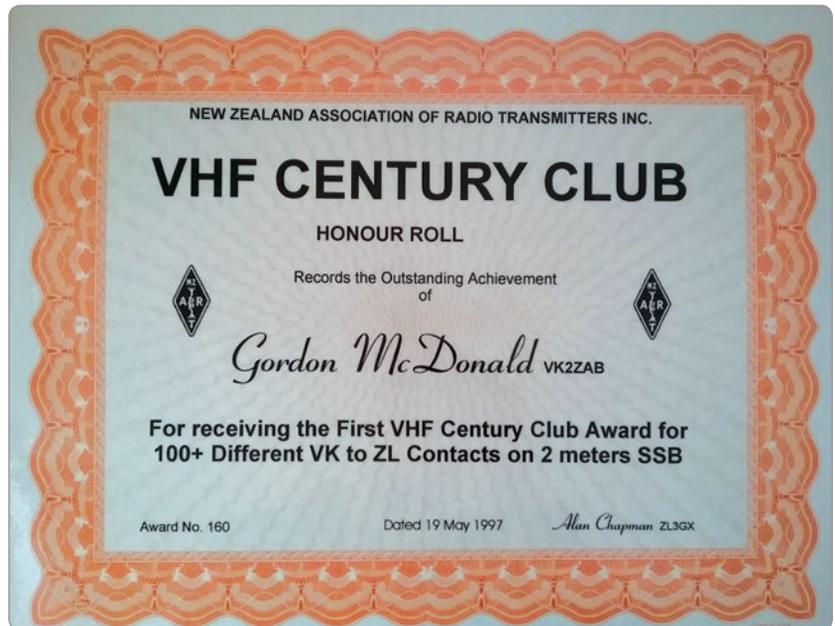


Photo 3: Gordon VK2ZAB/VK3EJ ZL VHF Century Club Certificate.

is required as per the MRF286 above! One example is the Ampleon BLF7G15LS-300P, this device works well at 1296 MHz only needing 3 – 4 watts to produce +300 Watts! If you need this power level and are starting from scratch this is now a good alternative vs the complexity of a combined 4 x MRF286 amplifier. Georg DF1SR has produced a design that can use this device and similar devices from other manufacturer (see photo).

And in breaking news, Ampleon and NXP have both introduced 250/500 Watt LDMOS devices to replace magnetrons in Microwave Ovens! The devices are available now for around US\$200, characterized for 2.45 GHz so maybe not an option for 1296 MHz just yet. Ovens should start appearing on the market late this year; it will be interesting to see what happens to device costs over the next few years as they take off. Many of the LDMOS devices used for VHF Amplifiers now were primarily intended for similar industrial applications and have steadily dropped in price.

All amplifiers will need 28 Volts but luckily there are plenty of switch mode supplies about as these are commonly used for “LED” strip

lighting and signs. The Meanwell brand is a good starting point and has good EMC specs but is usually the most expensive. There are a whole host of cheaper clones that probably are nearly as good as the Meanwell but beware of the cheap end that usually emit quite a bit of RF noise. For smaller amplifiers (50 watts), there are also 13.8 V DC to 28 V DC Buck boost regulators up to 150 Watt DC rating if you are serious about being able to run from a battery. Alternatively, you can always put two 13.8 V DC batteries in series. I have seen one arrangement where LiPo batteries (7 series cells = 29.4 VDC max) have been used with a smaller buck boost inverter that provides a 1 Amp charge. This is OK for intermittent as 18650 cells are good for +10 Amps for a short period of use but maybe not 50% duty cycle digital modes.

Gordon McDonald VK3EJ/ VK2ZAB

Gordon’s daughter Lynne has passed on (via Stephen ZL1TPH) a copy of his “NZART VHF Century Club” award he received 20 years ago.

There is of course a bit of a story behind the award! To qualify

for the “VHF Century Club” you actually need to work 30 unique ZL stations on 144 MHz. Gordon was not satisfied that this represented a significant achievement so instead set his own target of 100 unique ZL callsigns. Given the probable number of ZL stations active on 144 MHz with equipment good enough to work +2,000 km being much less than 100 Gordon considered this far more worthy!

Gordon (VK2ZAB then) set about working ZL. He had a magic site on the VK2 coast and would often be the first (and last) person to work ZL on 144 MHz during a VK-ZL Tropo opening. Gordon would start off working the top area of ZL1 then pan south with his antenna calling CQ as the band opened. During good openings he would even call by ZL districts as if he was in a DX contest on 14 MHz!

By 1997 Gordon had achieved 100 different ZL stations on 144 MHz and was presented the award on 19/5/1997. All on SSB of course, we all know Gordon’s dislike for CW! Gordon much later moved to Cobram and became VK3EJ, 100 km up the river from Echuca where Gordon was born in 1929. Vale Gordon.

In closing

Feel free to drop me a line if you have something to report. Contributions regarding club projects or proposed activities are always welcome. Just email me at david@vk5kk.com and I’ll include in the column.

73

David VK5KK

Meteor Scatter Report

Dr Kevin Johnston VK4UH

In this month’s column, we will look in a bit more detail at the characteristics of the different types of meteor “returns” we observe with Meteor Scatter propagation and the physics behind them. In

this context, I have used the overarching term “returns” to cover all types of “echo” resulting from the interaction of VHF radio signals and meteor trails. VHF Meteor Scatter propagation involves the processes of refraction and reflection or a combination of both. The two processes are intrinsically different but both result in the “redirection” of a radio signal back to earth so that they seem to be coming from a different place in the sky way beyond the natural horizon. Simplifying a lot of complex physics, Reflection is the process we normally associate with light hitting a mirror where there is an instantaneous interruption and diversion of the light (or radio) beam depending upon the angle between the beam and the mirror. A good reflecting surface will redirect a large proportion of the incident energy from what appears to a single point source or surface. Refraction is a different process where the radio signal or beam of light is progressively “bent” from one direction to another over a significant distance. This is the same effect leading to a mirage over a hot desert or hot road, where the viewer is actually seeing an image of the sky bent around to appear at the horizon giving the impression of water or sea. Refraction in general results in significant but variable attenuation of the radio signal. Most traditional ionospheric propagation from the E and F layers is in fact a refractive process rather than true reflection.

As has been discussed previously, the underlying event leading to Meteor Scatter propagation is the entry of minute particles of extra-terrestrial rock and dust from outer space drawn into the earth’s gravitational field. Initially, meeting negligible air resistance, such particles are rapidly accelerated by gravity on descent to the surface of the earth. The majority of meteors responsible for meteor scatter propagation are ablated i.e. “burn up” on entry

to the atmosphere at around 100 km in altitude, this being the height of the first part of the upper atmosphere sufficiently dense to provide air resistance. This is also the height of the E-layer; indeed the existence of the E-layer is due in large part to the presence of meteor ablation material. During the process of ablation, frictional air resistance leads to superheating of air molecules in the atmosphere and complete vaporisation of the meteor. This intense release of kinetic energy causes the air molecules and meteor ruminants to become incandescent i.e. emit light. This is the cause of the visible meteor trail across the night sky which we know colloquially as “shooting” or “falling” stars. Although the brilliant visual display is very short lived there remains a trail of ionisation consisting of ions and free electrons from both the metallic meteor and from the surrounding superheated air. This ionised track may persist from fractions of a second to several hundreds of seconds. It is this ionisation trail, and predominantly the free-electrons within it, that reflect or refract radio signals back to earth.

The electric vector of an incoming electromagnetic, i.e. radio wave, striking such an ionised track induces the negatively charged free electrons to vibrate resulting in the re-radiation of the electromagnetic wave. This retransmission effect is dependent on the density of the free electrons in the trail which itself falls exponentially with time. This phenomenon is partly due to outward expansion of the track and partly due to recombination of ions and electrons to the neutral charge state. There are two distinct forms of radio returns caused by meteor ablation termed “under-dense” and “over-dense”, which will be described. In practice however, many returns demonstrate intermediate characteristics of both.

By far the commonest type of meteor return we observe at VHF

is the under-dense trail. Under-dense meteor trails are induced by meteors and meteoroids at the lower end of the mass spectrum i.e. closer to the 0.1 g “grains of sand” size. During ablation, the ionised trail is weak and the free electron density is low. Incoming radio waves are able to penetrate the entire meteor trail with minimal attenuation. It is thought that each free electron scatters the incoming wave individually and the returning signal is the sum of all the signals coming from the individual free electrons. This is a pure “scattering” or refractive process. During ablation, the free electrons are initially distributed closely around the centre of the meteor path but rapidly diffuse outwards into the surrounding atmosphere. The tubular meteor trail rapidly expands in diameter, the free electron density falls exponentially with time to the point where the radio scattering is no longer supported. Scatter from higher frequencies e.g. 144 MHz drops-out before lower frequencies e.g. 50 MHz since higher free-electron density is required to support 2 m than 6m. The resulting returns are short lived, the duration being proportional to the wavelength squared and typically giving rise to return signals on 144 MHz of 0.1 - 1 second and proportionally longer on 50 MHz. In the amateur vernacular, we describe these short under-dense returns as PINGS. The received intensity of such a ping depends on the orientation of the meteor trail and radio path and is proportional to the wavelength cubed i.e. to the third power. All our efforts in digital MS communications have been developed to allow completion of QSOs making use of pings of this

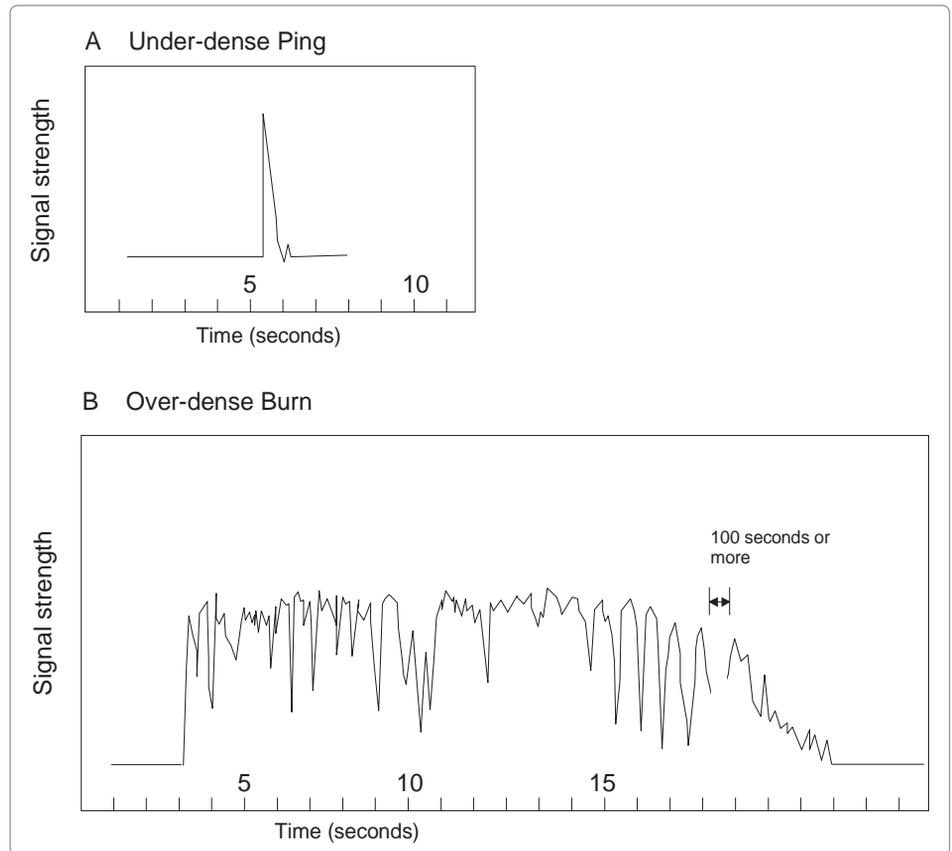


Figure 1: Graphic representations of an Under-dense “Ping” reflection (above) and an Over-dense “Burn” reflection.

order of duration and magnitude. The profile of a typical ping (power versus time plot) is characterised by a rapid rise in signal strength followed by an exponential decline occurring in a fraction of a second.

In contrast, over-dense meteor returns are induced by ablation of larger meteors, 1 g “pea-sized” or larger. In this case much larger quantities of kinetic energy are released and the meteors are able to penetrate further into the atmosphere. Ionisation is more intense and free electron density is much higher. In this case the meteor track behaves more akin to a highly reflective metallic cylinder in the upper atmosphere. Some texts refer to this type of reflection as being “Specular” which is defined as “having the properties of a mirror”. Radio waves initially cannot penetrate the cylinder and but are strongly reflected from its surface. The resulting returns

are more intense and typically of much longer duration. In amateur speak we term these returns as BURNS. (for completeness, in other regions BURNS are also known as BURSTS and the two terms can be considered as interchangeable). The characteristics of a typical Burn are quite different from the Pings described above. The longer persistence of ionisation of the hyper-dense trail results in reflection occurring simultaneously from many parts of the trail. This leads to rapidly changing episodes or constructive and destructive interference i.e. alternation between addition and cancellation of the reflected waves. After an initial rapid rise in signal strength there is often a further but slower rise. Typically, a Burn produces prolonged reflection lasting from tens to hundreds of seconds even at 144 MHz. The received signal has a characteristic ripple in amplitude, as seen in

Aircraft enhancement propagation, due to alternation between addition and cancelation of waves. In a typical hyper-dense burn the outward diffusion of the free electrons causes expansion of the reflective trail which causes a slow increase in its reflective area and is this is responsible for the second slower rise in received signal strength. Eventually the expanding trail will become so large that the free electron density falls below that required to maintain specularly and eventually an exponential decline in reflection occurs, as in a ping.

The power versus time profile of a typical Burn shows a rapid increase in signal, followed by a slower rise as the trail expands, a prolonged period of rippled signal, followed by an exponential decline to zero over periods of tens to sometimes hundreds of seconds. Even on 144 MHz, a long burn may

continue across two or three 30 second transmission using FSK441 or MSK144. On 50 MHz a good burn will allow completion of a complete SSB QSO.

For completeness of this explanation, larger fragments of rock entering the atmosphere may give rise to the much rarer "Fireball" seen occasionally on news items from around the globe, or if they explode on entry but above the ground this is termed a BOLIDE. Larger fragments still may not be ablated at all and may reach all the way to the ground still intact. Both the fallen rock itself, and the material they are composed of, are termed METEORITE.

This passing month has seen the release of two new version upgrades of the popular MSHV platform for Meteor Scatter. The latest version 1.45 appeared around the time this column was being

prepared and there has not yet been sufficient time for an in-depth assessment. Both new versions have a working implementation of FT8 mode. Not intended for meteor Scatter operation, FT8 is rapidly becoming the go-to mode of choice for HF digital communications as the logical successor to the JT65a throne. Operation of MSHV in MSK144 mode has apparently improved. I will endeavour to provide more information next month.

Meteor Showers

The next major shower on the calendar will be the Orionids, expected to peak around 22 October and then the Leonids around 18 November.

Contributions for this column are as always welcome. Please e-mail to vk4uh@wia.or.au

Kevin Johnston VK4UH
Brisbane



Silent Key

Ken Nisbet (ex-VK3AKK) VK2KP

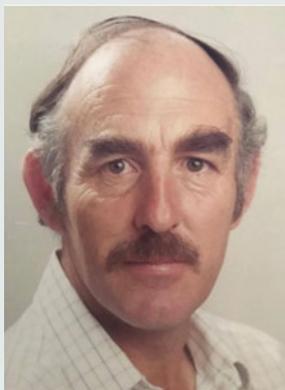
It is with great sadness to inform the amateur radio community of the passing of Ken Nisbet VK2KP.

Ken was born in Brighton Melbourne on 8 July 1940 and passed away peacefully after a protracted battle with cancer on 3 August 2017.

Ken started his working life in January 1957, when he was accepted into the PMG technician in training scheme; he excelled and his appetite for electronics never waned. He obtained his amateur radio license VK3AKK as a member of the Moorabbin and Districts Radio Club and with fellow club members produced a transistorised amateur band receiver kit as a club project.

Ken successfully applied for a position as senior engineer communications with ACI electronics. Ken developed the Acitron SSB 400 - a six band 400 watt SSB transceiver specifically for the amateur market. His personal Acitron 400 is now on display at the Kurrajong Radio Museum, Kurrajong NSW.

He also taught himself computer programming. Always keen to begin a new project, he could see a future for radio telemetry in Australia so in 1986 formed the company Rad Tel Systems. Everything was manufactured in-house and components were sourced locally, circuit boards



digital and analog were produced in WA, components were fitted by CNS at a sheltered workshop in Hornsby. This association lasting over 25 years and radios used were Tait, Maxon and GME. Ken, in his 40s, obtained a pilot's licence to enable him to get around the country in a timely fashion, clocking over 2000 flying hours.

I met Ken and Sue in 2000 when I answered an ad in AR magazine for a senior radio technician. Working with them, I got a good insight as to what it takes to run a successful business. Sue handled the Sydney end, dealing with government departments, frequency allocations, specifications,

quotations, drawing, production runs, day to day running of the factory and office. Ken was out in the field supervising installations, developing the software while on the go to fulfil council's requirements and drumming up more work to keep it all going.

Ken and Sue's sons Adrian and Graham came on-board around the same time as I did. Adrian was a commercial pilot and Graham was fresh out of university with a degree in Telecommunications Engineering.

Early in 2010 China produced their own radio telemetry units including a radio for around \$1600. The Sydney factory was wound up and anything remotely related to amateur radio was donated to The Wireless Institute of Australia NSW Division; several trailer loads were delivered to the Dural property.

Rad Tel Systems was re-badged as Automation Group specialising in software development to cater for developing digital technologies and tailored to suit the client requirements.

Ken is survived by XYL Sue, daughter Heather, grand-daughter Stephanie and sons Adrian and Graham their XYLs Kelly and Kathy and children Oliver, George, Zoe and Jay.

Vale Ken, 73 OM
Peter VK2HC



By the time most people read this article, NCRG will have run its Hamfest Weekend. In addition, we will have also conducted our AGM and voted in our next executive team to lead the club.

Over the past month, we have begun to consolidate all our current projects and gradually get the station back into an operational state. Our first decent operation was the Remembrance Day Contest. Chris VK6LOL, Stu VK6BG, Richard VK6BEC, Bob VK6BG, John VK6VZZ, Carsten VK6PCB and Steve VK6SJ competed in the Multi-Multi category with two dedicated HF stations and a dedicated VHF/UHF station. It was great to see some new blood in the team giving it a good crack! We managed 1438 points from over a thousand contacts. We were using a SteppIR Yagi on 40 m, dipoles for 80 and 160 m, 5 element Yagis on 15 m and 20 m, and verticals for 6 m, 2 m, 70 cm and 23 cm. Apart from getting a nice score, we all enjoyed catching up with old friends on the air; highlight being the light-hearted banter on HF and NextG with VK2GGC (the Good Guys Club). We won't submit to this article all the photos sent between the two stations! We got more points but they drank more beer. I think that makes it a draw. It would be good to see a few of the big gun contest clubs in the RD next year. (Challenge!)

Starting on the second Tuesday evening in August, we are commencing our technical presentations with Steve VK6SJ presenting on Simulcast Radio Network design.

As mentioned last month, 6 of our members (Andrew VK6IA, Joe VK6BFI, Gerald VK6XI, Wayne VK6EH, John VK6NU and Stuart VK6LSB) made the long trek to

Friedrichshafen for the Ham Radio Convention. Stu, VK6LSB provided the following report:

NCRG Members Visit to "Friedrichshafen Ham Radio Convention 2017"

Well it has been two years since I was at the Friedrichshafen Ham Radio Convention. When I finished my last holidays, I decided I would like to go back, I enjoyed it that much!

We all made our separate ways to Friedrichshafen Germany and we all arrived at the hotel on Wednesday 12 July 2017 and were greeted with a beer after a long journey.

On Thursday, after we had a good breakfast, we visited the Zeppelin Museum, then our favourite Beach Club Cafe and checked out Lake Constance. At the same time as Ham Radio 2017 there was also a festival on called Seehasenfest, also known as the German Festival of the Rabbit. There were lots of people, plenty of German beer and food to enjoy!

Friday morning it's off to the Messe Friedrichshafen Ham Radio. The best way I can describe the venue is as a bunch of aircraft hangers, located on the other side of Friedrichshafen airport.

There are five main halls that Ham Radio use. The first hall is for Radio Clubs and Ham Radio suppliers like Flex, Icom, Kenwood, Yaesu, Kuhne electronics, Optibeam, Wimo, Difona and antenna manufactures and ARRL and RSGB and many more. The second hall is for lectures and presentations, of which many were in English.

The third and fourth halls were for the flea markets. They have everything you could think of from second hand radios and radio accessories to connectors

to vacuum variable capacitors, button capacitors, big and small dummy loads, big resistors, power cable, and coax, lots of electronic components and lots of test equipment.

The fifth hall is Maker fair, selling computers, 3D printers and Robots.

We spent three days at Ham Radio Meese Friedrichshafen looking at the new equipment, trying the latest radio releases, catching up with friends from around the world, talking to other clubs; there is a lot to see there! Andrew VK6IA got to spend time on the Flex-Radio Stand in preparation for his new job starting with a Flex Distributor on returning to Australia.

Sadly it comes to the end of our time in Germany. Our group shared a final meal at the hotel. Monday morning, we arrived at the Friedrichshafen airport in transit to Frankfurt airport. We said our good byes and we all went our separate ways. Some of us went to England and to Ireland and others went to Amsterdam and Sicily.

As for Andrew and Stuart, they went to England to visit Andrews' relatives and to meet some Amateur Radio friends. Wayne joined them a couple of days later, then they visited a few pubs, visited a couple of radio shops, including Lamco in Barnsely, Radioworld UK in Walsall and Knights Electrocom in Gainsborough.

They also attended the Finningley Amateur Radio Society Rally where they were given a guided tour of the facilities and also visited Jodrell Bank Radio Telescope and the Leicestershire Space Centre.

They enjoyed a nice lunch in Nuneaton with a couple of local hams, Andre G1KDU, Peter G1EBW and Ken G4VSJ. A great time was had when Andrew showed his

newest toy, a DMR Handheld and Blue Stack DVmega DMR hotspot while enjoying a few drinks. Our UK friends all had a QSO with VK6PA Peter back in Perth.

Andrew and Stuart were invited to do some operating from the Rolls-Royce Radio Club in Hucknall near Nottingham (G5RR). Unfortunately, they had no propagation back to Australia but did manage to make some contacts into Europe, India and even the Pacific.

Thanks to Stu VK6LSB for this report.

73 from Steve VK6SJ

Hills Amateur Radio Group (HARG)

The International Lighthouse & Lightships weekend has always been a popular event at HARG and this year was no exception. We were unable to get there early enough to beat the snapper fishermen to the end of the North Mole, at the entrance to Fremantle harbour, so had to be content with a location just back from the end. It was still a great spot to operate HF from. The water really makes a difference. After a wet start, we had quite a few hours of fine weather with some light winds and we worked quite a few stations. That all changed quite suddenly and in short time it was all hands-on-deck trying to hold

the gazebo down as the wind tried to relocate it and the rain seemed to be coming in horizontally. After some quick references to the bureau's radar we decided that it wasn't going to get any better, so in what must be a world record time for a pack-up, we had it all in the back of the vehicles and sought the comfort of a nearby coffee shop.

HARG's AGM has been and gone for another year. It was great to see all positions nominated for before the day; makes for my favourite sort of a meeting, a short one. Congratulations to who were elected. This year's committee is Ray VK6ZRW (President), Martin VK6ZMS (Vice President), Ian VK6DW (Secretary), Alan VK6AN (Treasurer), Alan VK6PWD, Christie VK6XCJ, Rob VK6AAH, Steve VK6CS and Craig VK6FLAM. Another great committee!

We have a long weekend in VK6 at the end of September and the group is looking at another RF campout. John VK6FJON and Alan VK6PWD have been busy scouting out new sites and think they have come up with another good one. It will be great to get out portable into the bush as the weather wasn't kind for our last park attempt. Speaking of park attempts, we will try again soon with hopefully some better weather.

HARG has two officially set

meeting days each month on the second and last Saturday's. We have access to the shack on most other Saturdays in the month as well. The last Saturday of the month contains the general meeting with all other occasions left open for social & practical activities. Even the Saturday with the general meeting is a social event. Doors officially open at 1:00 pm but you'll usually find someone there a little earlier. We usually kick off with a sausage sizzle. Visitors are always welcome. Get some more information at our website www.harg.org.au or our Facebook page @hillsarg.

73 Ray VK6ZRW

Ham College

Ham College held another weekend foundation training course recently and a week later an assessment day. They are pleased to report a 100% success rate, so listen out for Dave, Mike, Clinton, Dan, Chris, John, Brian, Russell and Nicholas when they get their shiny new Foundation licences. The college has its AGM soon and hopes to be able to announce new and returning office bearers. They desperately need volunteers to help with courses at all levels, could you assist? Contact the college via hamcollege.com.au

73 from Andrew VK6AS

The Capes Lighthouse Radio Group

The Capes Lighthouse Radio Group is a small group of amateurs based in Perth and the South West who activate a pair of lighthouses for the International Lighthouse Weekend. The Lighthouses activated are at Cape Leeuwin (VK6CLL) and Cape Naturaliste (VK6CNL) on the far south west corner of WA. Cape Leeuwin is on the junction of the Southern and Indian Oceans. The group was formalised three years ago under the patronage of Wally VK6YS (SK) and continues to grow new members each year.

The group has a particularly good relationship with Cape



Photo 1: Peter VK6LB, Martin VK6ZMS and Marty VK6RC comparing HF antennas at the North Mole in Fremantle.



Photo 2: The station set up at Cape Leeuwin.

Leeuwin Lighthouse. One of the team, Anthony VK6AXB refurbished the original 304 kHz Non Directional Beacon (NDB) from Cape Leeuwin (which had the callsign AXB) and this has been housed in the museum at the Lighthouse for a number of years now. Anthony also grew up in Karridale near Augusta so has a lot of history in the area. This obviously inspired him into radio as he has also made radio his life long career.

This year at Cape Leeuwin had CLRG stalwarts Anthony VK6AXB, Shaun VK6PAL and Phil VK6ADF, ably assisted by Steve VK6SJ, Matt VK6QS, as well as new members Jarrad VK6FFAR, Nick VK6FSEA, Hans VK6XN and Michael VK6TU up at Cape Naturaliste. On Sunday, we also had a visit from SWL Colin, who has worked in defence

and broadcast HF installations all his life. Notably, we missed Nigel VK6NI's involvement this year; Nigel has activated Cape Naturaliste for as many years as any of us can remember but this year with Nigel being in full time retirement, he has been busy wandering the country with a caravan instead!

Antennas installed included a

160-10 m OCF dipole, a 20, 17 & 15 m Spiderbeam and a 40 m vertical. Radios were definitely something old; (Shaun's very old Icom IC-756 transceiver), something new (Steve's 6700) and something blue (Matt's Anan 100D). Between us we had two stations on air for most of each day. Masts employed were spider beam portable mast and a 4-section gut-buster; they were very easy to assemble. Rotator for the Spider Beam was our tried and proven string-with-a-rock-attached (very technical). All antennas worked great. Jarrad assisted with the antenna assembly then travelled up to Cape Naturaliste to set up and operate VK6CNL with Michael VK6TU.

The weather was the normal blustery cold and wet climate that it is always like at this time of the year. Propagation was good though and we managed to work well over 20 lighthouses from all over Australia as well as far away as Germany. Hans VK6XN got us all interested in FT-8, a new digital mode gaining popularity in HF (not a mode for rag chewing it seems!).

All in all, it was a good opportunity to show the broader



Photo 3: The Spiderbeam set up at Cape Leeuwin.



Photo 4: The station set up at Cape Naturaliste.

community what amateur radio is all about, and we had many visitors through the shacks.

JOTA/JOTI

Here in VK6 we are busy preparing for JOTA/JOTI which this year is on the weekend of 20-22 October

2017. It's the 60th Anniversary – Celebrating 60 Years of Connecting Scouts. If you'd like to help your local group, and haven't got in contact yet, now is the time - they really need to start planning. Head to <http://JOTAJOTI.info>, the official World Organisation of the Scout

Movement website for JOTA-JOTI.

On behalf of the NewsWest Team, I'd really like to know what other groups are operating so we can share plans and promote the weekend's activities. I already have contacts in the US and UK lined for some skeds – keen and waiting to talk to Australian Scouts. Pop a quick email with "JOTA" in the subject line to newswest@vk6.net if you're up to something so we can collaborate.

Head to VK6.net, where I've included a list of calling frequencies, and link to the *World Scout Calling Frequencies*.

73s de Glynn VK6PAW

West Australian Repeater Group

Anthony VK6AXB advises that the West Australian Repeater Group (WARG) are aiming to arrange some site working bees for the latter part of the year, now the wintry weather is improving. Maintenance work is needed at the two Roleystone sites and also Tic Hill. The Committee is also working through a proposal for strategic planning day, with a

survey of members and the wider AR community done beforehand to provide input.

WARG continues to meet on the first Monday of the month, or second where the first is a public holiday, at our new meeting venue, the 1st Pelican Point Sea Scouts facility located at 12 Australia II Drive in Crawley, adjacent to the Royal Perth Yacht Club. Doors are usually open at 19:00 for a 19:30 start, with tea, coffee and refreshments available. Remaining meeting dates for 2017 are October 2, November 6 and December 4.

WARG's regular on-air technical and general net continues every Sunday, at 10:30 local time, on



Photo 5: The mast at VK6CNL.

VK6RLM, 146.750. New members are welcome, contact WARG at secretary@warg.org.au
73 from Anthony VK6AXB

Peel Amateur Radio Group

After many negotiations, fighting with weather and juggling times, our 2 m repeater is on air. Having had to move from our old premises at the SES HQ in Mandurah, the repeater was relocated to the club president's residence. The repeater uses two Wouxun transceivers back to back however we did have issues with the diplexer initially. After tuning and repairing the cans, things were looking better. Tuning diplexers is very much a black art without much experience and the right gear, so many thanks to Ray VK6ZRW for helping with this. There is also a bit of a trick in balancing the receiver audio out and the audio transmitter in. Because of this we did have, on occasion, pretty poor audio. We did discover the receiver output was overdriving the transmitter. A few tweaks and with the audio levels adjusted, we are now down to an armchair copy.

In the mean-time, negotiations were underway with the building management group to install the mast and necessary gear to improve the repeater coverage at the new SES HQ. The first reactions from the SES when we asked about erecting the antenna were "Now yer can't do that there 'ere". They were concerned that we would mess up their new HQ and possibly damage the roof. Eventually we were provided with a small cleaner's room with no roof in what is called the "Mud Room". It was only 140 cm square. We had to put a roof on that which became our radio room floor. As guests in the building our brief was to make any installation removable and it was not to take up any of their floor space or leave a footprint when and if removed.

Much research went into locating a rooftop mast to support our antenna and comply with their conditions. Eventually Telco Antennas in Queensland supplied us the details and plans for their TF-RM-



Photo 6: The new mast on the roof at PARG.

SM-5 Heavy Duty Roof Mounted Serviceable Antenna Mast. It was a very neat, well-engineered, certified design which, in the final negotiation, was what got us permission to install. We were not going to leave a footprint if the mast was removed and we would not damage the roof. The antenna itself was a 2 metre COL-4 Collinear from WA Communications in Bunbury. Both companies served us well and were very patient with us during the negotiations which did take several months to finalize.

We have to thank most sincerely the Mandurah City Council who were very helpful during the whole process and gave us a grant to purchase the mast and antenna. We thank

also the Department of Fire and Emergency Services as well as the State Emergency Service - Mandurah for their permission and kind consideration of our request. On 30 July 2017 we did, dodging between wind squalls and rain, complete the installation of the antenna and put the repeater on air. It was gratifying to have so many PARG members turn up to and help with what was a fairly long process. We were well rewarded with much better repeater coverage throughout the Peel District. It just goes to prove if one goes about things the correct way everything can be made possible. We did follow their guidelines to the letter.





VK7news

Justin Giles-Clark VK7TW

e vk7tw@wia.org.au

w <https://groups.yahoo.com/neo/groups/vk7regionalnews/info>

North West Tas. Radio & TV Group (NWTR&TVG)

Congratulations to Peter Ghossein VK7FZFZ, Blake Cooper-McNear VK7FBCM and Matthew Pullen VK7FMJP who all passed their Foundation licence assessments with flying colours. A big thank you to David VK7DC for his many hours of tuition and training and he has now been joined by new member Keith VK7KW who is another Assessor along with Tony VK7AX. The education and assessment team on the North West coast of VK7 is looking very healthy! So, if you are looking for training and/or assessments on the North West Coast – then contact one the above.

NWTR&TVG held their August meeting on Saturday 13 and this meeting saw many new members and some special guests in Peter VK7PD, Andrew VK7DW and Peter VK7BP. The meeting business was quickly dealt with and Peter VK7PD & Andrew VK7DW demonstrated their 3.4 GHz Panel transverters and 1296.1 MHz transverters. Peter VK7PD and Dave VK7DC went portable whilst Andrew VK7DW manned equipment at the Club rooms. Many contacts were made and contributed to Remembrance Day logs on the microwave bands. The afternoon finished with a delicious afternoon tea.

A SSTV Gateway is being installed on the 2 m VK7RTV Repeater on 145.625 MHz. Tony VK7AX is setting-up gateway software from Gerd DF3EY on this repeater. Stay tuned for further updates via the Sunday VK7 Regional News broadcasts.

Northern Tasmanian Amateur Radio Club (NTARC)

NTARC's Winter Social Dinner was held on 23 August and was well attended and enjoyed by all. Steve's Grill in Launceston was the venue and the food and wine flowed and NTARC are certainly including the event next year on the club calendar.

A huge thank you to Tasmanet P/L and Murray Southwell VK7ZMS for the generous sponsorship of an NBN fast broadband connection

into the Rocherlea clubrooms. A thank you also to Dylan VK7ZL from NBN for his assistance. This will certainly be put to good use for NTARC's JOTA/JOTI effort this year.

Radio and Electronics Association of Southern Tasmania (REAST)

The August Presentation Night centred on Antarctic Communications and was led by Kim VK7KB, Alan VK7KAJ and Roger VK7ER.

Alan started fully kitted out in

his wintering outdoor outfit and proceeded to demonstrate the features of the outfit. Kim, Alan and Roger then took the audience from early times beginning with Wally (Walter) Hannam at Commonwealth Bay on the Mawson expedition right up to the introduction of satellite systems. This included the multiple 10 kW Collins transmitters in each of the mainland Antarctic stations with separate



Photo 1: Alan Jeffrey VK7KAJ in full outdoor Antarctic outfit. (Photo courtesy of Justin VK7TW.)

transmit and receive antenna farms consisting of 150 foot towers and vertical wire log periodics and Rhombics at HF frequencies (2-30 MHz) pointed along the axis of mainland Antarctic stations which conveniently also pointed to Melbourne and Sydney Radio.

Weather skeds from all of the Eastern Antarctic stations (Australian, Japanese, Russian and French) were channelled through Mawson Station to Melbourne for collection and distribution to the world weather network. This was all done through initially using CW, then teletype.

The channel from Casey to Melbourne and Sydney was a 24/7 bi-directional channel. This led into descriptions of expedition and traverse radio links, ship radio operations, aircraft operations and base communications. The presentation finished with Kim showing some of the equipment that was used including Rhode and Schwartz, Drake, Icom, GE, Motorola, etc. A huge thank you to REAST members Kim VK7KB, Alan VK7KAJ and Roger VK7ER who put on a great presentation.

REAST participated in the Festival of Bright Ideas (FOBI)



Photo 3: FOBI 2017 – Schools Day – Sean VK7FAZE showing weather satellite decoding. (Photo courtesy of Justin VK7TW).

at Princes Wharf No. 1 (PW1) on Friday 11 August for Schools Day and on Saturday 12 August for the public day. FOBI is one over 200 Science events that happen during National Science Week in Tasmania.

A huge thank you to Sean VK7FAZE and Mike VK7MJ along with the author who were on the stand for the two days. We aimed for many hands-on demonstrations

of radio and tried to give students and adults an appreciation of how pervasive radio technology is today. It was all about the “Magic of Radio”!

On the stand we had:

- Light Communicators (WALL-Es)
- Microwave Demonstrator (Audio and Video)
- LIPD RF connected Terminals (keyboard to keyboard)
- Satellite Weather Station – decoding weather images
- Software Defined Radios (showing broadcast band)
- Morse Code Decoders
- Handhelds, mobiles phones, etc
- Large display TV showing many of the interesting aspects of amateur radio.

On the Friday, 1900 primary school kids went through PW1 and the REAST stand had a group of 10 kids every 10 minutes between 9:00 am to 3:00 pm and we showed them the magic of radio!

Saturday was a little more casual as it was the public day however many people and families came through and we were able to show them that magic. Many people do not realise that the “tech” they use has one or more radios within it (WIFI, BluTooth, LIPD, Mobile

Photo 2: Festival of Bright Ideas 2017 (Photo courtesy of Justin VK7TW).





Photo 4: FOBI 2017 – Amateur Radio presentation repeating on the big screen and Software Defined Radio (Photo courtesy of Justin VK7TW).

phones, etc).

Joe VK3YSP and Julie VK3FOWL from the Schools Amateur Radio Club also ran electronics kit workshops on the Friday and Saturday and they were blown away with the event. A huge thank you to Joe and Julie for coming down to Tasmania for FOBI 2017. Again, thanks to all involved in making FOBI 2017 another successful event.

The experimenter nights have been a hive of activity with finishing the conversion of 3.4 GHz Panel Transverters and converting three (KL50, KL150 and KL450) repeater units to Power Amplifiers for the GPS locked beacons project. We had some very special visitors in Joe VK7JG, Peter VK7PD and Ross VK7ALH who came along and demonstrated their 3.4 GHz panels and gave us some hints on how to improve ours; thanks Joe, Peter and Ross.

SK John Adrian Rogers VK7JK

It is with sadness that we let you know of the passing of John Rogers VK7JK.

John was born 28 July 1923 and went silent key on 18 August 2017 aged 94. He was a WIA and REAST Life Member.

John grew up in Britain and was one of the many who went off to WWII and flew Mosquito Photographic Reconnaissance missions in and around Singapore for the RAF. Post war (1947-49) John undertook teacher training and dedicated his life to teaching. In 1958 he became head teacher at an ESN school in Manchester and in 1970 became a school inspector. 1979 John retired and decided to move to VK7 and settled in Tasmania in Blackmans Bay for 33 years until his move to Strathaven in June 2012.

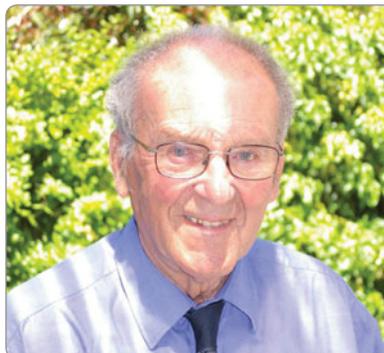


Photo 5: John VK7JK.

John says he had five reasons for coming to Tassie: “1. The weather’s better; 2. We spoke English; 3. We drive on the correct side of the road; 4. It was half the pace of life back in the UK and 5. The sun came out enough to charge his watch battery!”

John’s interest in radio started with him becoming a teacher but it wasn’t until he arrived in VK that he got his amateur radio licence. In 1980 he became involved in the VK7 broadcasts and in the words of Richard VK7RO: “John was one of the best things to happen to amateur radio in Hobart because - he was really good at getting things going” He used to stand up in the meeting and raise enthusiasm by saying things like...”it’s like manure - no good unless it’s spread around”.

“He was unbelievably keen and organised many activities.”

John resurrected the WIA Tasmania Divisional newsletter called QRM in 1984, becoming the editor and these are still available in the State Reference Library. In 1985 he helped to start the Activity Group with an emphasis on QRP and construction and by 1987 John was Broadcast Coordinator and was involved with the VK7 broadcasts for 28 years. John also helped start amateur radio classes with Richard VK7RO.

John has suffered several family tragedies over the past years, as well as his poor health, but still came up bright and shining. I think Charles says what we all would like to say... It has been a privilege to know one of “the RAF few”, and of course we all loved John.

Vale John.

(Justin VK7TW, Richard VK7RO, Charles VK7PP)



Silent Key

Clem Allan VK3BVI

Hamilton Clem Allan was born 21 March 1936 in Hastings, Victoria. He lived at Crib Point on Western Port Bay and began his education there. His father John worked for the Victorian Railways, necessitating his mother Vera and family moving around the State. This led to a move to Woomelang in the Mallee region of western Victoria.

Clem was a very good swimmer, first developing this skill in local dams. When his family moved to Werribee later in his youth, where his father was station master, this attribute would serve him and the 1st Werribee Scout Troop well when he competed very successfully in the then Footscray District Scout annual swimming sports. Scouting was where he forged many life-long friendships including my father and others in Werribee that he maintained until his passing, and is retained by his XYL Pat. His Scouting days were adventurous and like those of us that went through the movement, stood him in good stead for the rest of his life. As an adult, he was a Cub leader at 4th Ivanhoe Scout Group.

As a teenager Clem worked on one of the then many local poultry farms in Werribee as well as at N A Kendall and Sons, a local blacksmith, wheelwright and general engineering establishment. Post World War II there were many surplus military aircraft parked in and around Werribee, which Clem and some of his mates would sneak into to 'borrow' mementos and electronic parts from aircraft awaiting their fate, to build crystal sets and other radio apparatus. It wasn't surprising then that Clem ventured into electronics as a career. He studied at night school at The Working Men's College of Melbourne, later to become the Royal Melbourne Institute of Technology, now RMIT University, working during the day to support him.

Once qualified with a Broadcast Operators Certificate of Proficiency (BOCP), he commenced work at Melbourne commercial radio station 3DB in 1954, owned by the Herald-Sun that also established television station HSV7. He subsequently sat the amateur radio regulations exam and became VK3ZIV. These were the golden years of radio when many broadcasters went onto become TV personalities in the early days of television broadcasting in Australia from 1956. It was at 3DB that he met his lifelong partner Patricia Burke who operated the company's telephone switchboard. Marriage followed and the couple established a home in Heidelberg West, not far from 3DB's transmitter site. Three children followed: Lynne, Glenn and Jasmine.



In 1960, an opportunity arose to build and repair hearing aids for Maico in Heidelberg (that subsequently became the original Icom agents in Australia). Clem's love of radio however saw him return to 3DB in 1965 where he ultimately became deputy chief engineer.

Clem had other interests aside from radio. He was an accomplished pistol target shooter and member of the Collingwood Small Bore Rifle Club. Clem's forte was, not surprisingly, audio and studio equipment. He had excellent RF skills as well but if one wanted to know anything about Hi Fi, distortion, compression, emphasis and the like, Clem was your man.

Clem's broadcast industry career was substantially spent at 3DB however he did short stints at 3AK and 3GL. In 1977, he and Pat purchased the River Road Caravan Park in Merbein near Mildura. Clem loved the social interaction with the guests. Those of us that knew him well all know that Clem was always good for a chat! Clem's amateur radio activities took a back seat on and off during the raising of his family and full and part-time work commitments; not an uncommon theme. It was in Merbein however that he rekindled his interest, sat his Morse code exam and subsequently becoming VK3BVI.

Clem and Pat eventually purchased a newsagency in Sydney Road, Brunswick. After successfully running this business for many years they moved to Hepburn Springs to owner-build a house in Porcupine Ridge near Daylesford in Victoria. The property is a masterpiece and one that anyone would be proud to call their own. Clem and Pat become involved in the local community with organisations such as the Country Fire Authority, with Clem receiving his 25 year service medal in 2014. Clem went to work for Tandy Electronics in Ballarat while building the couples' house in their spare time. People enjoyed dealing with Clem and Tandy did well out of this, as he was widely regarded as a salesperson that knew what he was talking

about, winning company awards along the way for sales performance. Both became partners in the Penny Arcade Milk Bar in Daylesford, another successful business venture, after Clem left Tandy.

Clem established a well-appointed amateur radio station at Porcupine Ridge and joined the Ballarat Amateur Radio Group and acted as the weekly HF net controller for many years. He also became a member of the Central Goldfields Amateur Radio Club, was a member of the Radio Amateurs Old Timer's Club and Amateur Radio Victoria. Clem was a long-time member of the WIA. Ironically, in the 1960s, he became the draftsman for Amateur Radio magazine. Ironic, because Clem once told me he hated technical drawing when he was at school.

New Year's Eve was an annual highlight, with Clem and Pat getting together with their old friends from Werribee each year for a night of food, fun and music with Pat being the central musician tickling the ivories, being the accomplished pianist she is.

Clem knew me all my life. Interestingly and despite the family friendship going back to his and my father Neville's childhood, we did not connect in AR terms until I was in my very early 20s, circa 1980. Clem was a master craftsman. Aside from building his and Pat's home in Porcupine Ridge, Clem's electronic homebrew projects were the stuff of Concourse d'Élégance standard. I am the proud owner of a VK5JST analogue aerial analyser Clem assembled for me from the kit I obtained and ancillary parts. It is of commercial quality.

Clem began to suffer a health problem a few years before his passing that was incurable, resulting in a long but relatively pain-free downhill run until his final days. During that time, he maintained his interests until a few months before passing on 20 March 2016, the day before his 80th birthday. Clem is remembered by those of us that knew him very fondly. His trade mark goatie, sense of humour, 'always on for a chat', technical skills, and general congeniality made him a popular person in all the professional and personal interest activities he pursued. Clem is not only a loss to the AR community but also to Pat, his family, his many old friends and society more generally. He is survived by his widow Pat, their three children and respective grandchildren.

Authored by Bruce R Kendall VK3WL/9V1WL with the assistance and input from Pat Allan, Glenn Alan VK2NVI and sisters Lynne and Jasmine.





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

Your contribution and feedback is welcomed.

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