Amateur Radio

Volume 83
Number 10
October 2015
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Volume 83
Number 10
October 2015
ISSN 0002-6859

The Journal of the Wireless Institute of Australia

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Production Deadlines
All articles, columns, hamads and advertising booking by **first day of previous month.**

General

This month's cover

It sounds idyllic – sailing in tropical waters in a luxury motor yacht. Read the account of Stephen Warrillow VK3SN of his trip in the Whitsundays, when amateur radio was added to the mix. Photo by Stephen Warrillow VK3SN.

Technical

Columns

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).

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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.

Wireless Institute of Australia

ABN 56 004 920 745

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Editorial

Peter Freeman VK3PF

Portent of the solar minimum?

The past few weeks have seen very significantly different propagation on the lower HF bands. I tend to spend a reasonable amount of time on 40 metres: focussing on chasing SOTA and Parks activators or being out there occasionally as an Activator.

Sunspot numbers have been lower and we have also had occasional solar events which have disrupted the ionosphere, resulting in poorer propagation. Over the days before I prepared this item, the Hourly Area Prediction HAP Charts from the Space Weather Services pages (*http://www.ips.gov.au/HF_Systems/1/1/1*) have typically shown a maximum usable frequency for close in HF communications of 4 MHz and sometimes less. This means that the usual Near Vertical Incidence propagation is simply not usable for those short to medium range contacts. One often sees HF Communications Warnings such as this:

"Due to continued very low levels of ionising radiation and expected rise in geomagnetic activity levels from 11 to 13 September, mild to significant depressions in MUFs and degradations in HF conditions may be observed during this period."

Not good news for those playing SOTA or Parks!

As we move toward the solar minimum around 2020, conditions are likely continue to decline as the sunspot number decreases. There are many predictions available on the web.

More importantly, we will need to consider our options for operating: band and mode to use will become more important.

There have already been some discussions on the SOTA_Australia Group about the viability of 2 m for activations. Several have noted that 2 m FM may work adequately if you are at a location close to a population centre with a number of resident amateurs. One may be able to gain the number of contacts (four) to qualify a summit. Perhaps more should consider 2 m SSB? You can build small lightweight Yagi antennas that pack down to manageable packages. Or even simply string a dipole or collinear vertical antenna out horizontally broadside to the direction of likely contacts. If you are using a HF/VHF UHF multiband radio (FT-8x7, IC-706, etc.), you will have the ability to operate on 2 m SSB. Add a sma Yagi and you may be surprised at the distances you can work. For example, Andrew VK1NAM has had good success using Aircraft Enhancement on 2 m – check out his blog.

It is certain that propagation will change. As amateurs, we have considerable flexibility in the frequencies that we can use. We will need to be more alert to the ionospheric conditions and the effects on propagation and be reac to utilise openings when they occu

Another possible outcome may arise after the World Radio Conference in November. Amongst many other proposals is consideration to allocating some spectrum to amateurs at around 5 MHz. Studies to date indicate grea potential for amateur use of this segment of spectrum, with some

Continued on page 5

WIA comment

Phil Wait VK2ASD

t never rains but it pours

ast month I told you that the WIA oard was meeting in Melbourne o review the operation of the WIA lational Office in order to improve ember services and position the rganisation so it can capitalise on ture opportunities.

Well, a lot has happened since en.

Firstly, the Australian overnment announced the nplementation of the Spectrum eview recommendations. The urrent apparatus, class and ectrum licensing regimes will e replaced with a new, single ence type based on a set of key arameters, such as frequencies, eographical details, rights to newal, terms for variation or vocation, together with price and ayment methods.

Secondly, the ACMA ansitioned from its old RADCOM ensing platform to the new PECTRA system developed under roject HELM (Holistic Engineering nd Licence Management). There e a number of changes that ill affect both new and existing ensees; for instance, if you have st passed your first amateur ence assessment, the ACMA ill now send you an invoice for e licence fees and you will need pay the ACMA directly, not via e WIA; if you are upgrading to a gher level licence you will need to ply for a completely new licence, t just upgrade your old one; and if u are like me and leave things till e last minute, you will now have days to forget to renew your ence following an initial Validation tice from the ACMA.

Thirdly, following the review of the WIA's office, it was determined that that the existing office structure did not meet our current and future needs. A decision was made to remove the position of Office Manager and replace it with an Executive Officer position with a much more active responsibility for the development and implementation of strategies designed to improve member services, and increase membership and support the Board. As a result, Mal Brooks has left the WIA, and Fred Swainston VK3DAC is acting in the Executive Officer position for a limited time. The WIA Board thanks Mal Brooks for his past service and we wish him well for the future. Recruitment action to select a candidate for the Executive Officer position will proceed in due course.

Fred has hit the ground running, and is currently working his way through our business, e-Commerce, website and membership database (MEMNET) systems, and processes and procedures, with a lot of help from the crew of volunteers in Melbourne. That may not sound like much, but the exercise has revealed a significant amount of duplication and inefficiency, which will ultimately lead to savings in staff time and increase the profitability in areas like the bookshop. Most importantly, if all the recommendations in the Government's Spectrum Review are adopted, the WIA will need to be ready to play a much greater role in the administration of amateur radio in Australia in the not too-distant future.

As I said last month, change is difficult, and there will be some speed-bumps along the way. The costs of the office restructure, coupled with our international activities protecting our current bands and pursuing a case for a new Amateur allocation at 5 MHz, including sending a representative to the 2015 World Radio Conference in Geneva (WRC-15) next month, and the tARU Region-3 meeting in Bali this month, where we also need to be represented, is turning 2015 into a very expensive year. So, who said *"it never rains, but it pours"*?

One thing is for sure, we need every licensee possible to join the WIA so we are in the best possible position to represent Australian radio amateurs through this period of great change, and beyond. If you're already a member, thanks; buy a book or three and don't forget to renew. If you're not a member of the National WIA, please do consider joining – it's only through membership of the National organisation, seen by the authorities as the only peak representative body, that you contribute to these vital activities, get to have a say in the future of amateur radio in Australia, and ensure the future of the WIA as your representative.

Hopefully, by the time that the deadline for next month's column arrives, the situation will have settled down somewhat and I can concentrate on other things.

Phil Wait, VK2ASD
President, WIA

Continued on page 5

WIA news

ABC Radio Perth talks about amateur radio

The topic of amateur radio had a good airing on the Gillian O'Shaughnessy breakfast program on ABC 720 Perth, which started with the International Space Station (ISS) contact made in the United Kingdom and ended in a long interview of a West Australian. On August 20 it had a report of Adrian Lane 2E0SDR who had contacted the International Space Station from his garden shed. He recently gained national newspaper, television and radio station publicity about it.

One newspaper said that the 52-year old of Coleford, Gloucestershire in England's south spoke with a US astronaut from the comfort of his shed. In the excitement of making contact, the name of the space traveller was not recorded.

After trying to make contact for a month, he plotted its route working out a brief overhead contact window. Calling NA1SS that time last October, he was delighted when an American astronaut answered.

Adrian 2E0SDR said: "I asked him what the stars looked like from up there and he came back to me and said with no atmosphere up here the stars are really bright. But he told me when you look down on earth it's something else - it's just a mass of colour where everything else up here is black."

Hoping to make another contact with the ISS, Adrian 2E0SDR has been communicating from his shed for almost 20 years, but usually only speaks to ground based fellow radio hams. Some ISS crew members who are also radio amateurs contact other hams during their free time. They also have scheduled chats with school students through the Amateur Radio on the International Space Station (ARISS) program.

Feeding right into that piece on the ABC radio program was local radio amateur Onno Benschop VK6FLAB, who told of the ARISS contact that marked the 50th anniversary of the famous overpass of astronaut John Glenn. On February 20, 2012, West Australia celebrated the anniversary of the first American to orbit the Earth in the Friendship 7 spacecraft. On that mission, Glenn flew over Perth and the people turned on their lights to acknowledge him, and it became known worldwide as the 'City of Light'. Onno VK6FLAB told of the excitement the anniversary event created, which involved amateur radio talking to modern day space explorers. The highlight was the opportunity for young people to speak with and ask questions of the astronauts on board the International Space Station.

With his factual informative style, plus broadcasting and technology experience, he also took the opportunity to promote some of the history, and diverse nature of Amateur Radio today, in an interview that lasted more than seven minutes. Onno VK6FLAB spoke how the activity began with spark gap transmitters; how it had many aspects to it including portable activations like the Summits On The Air and the International Lighthouse and Lightship Weekend. He explained how others make radio contact with far flung weird and wonderful places and interesting people. They all explore the hobby that includes the common AM and FM radio, but also use other digital techniques, including the new narrow-band digital voice FreeDV technology.

If you want to read more and hear the radio segment, then visit 'Pilots of the airwaves - ham radio in Perth' on the ABC 720 Blog Post at *http://blogs.abc.net.au/wa/2015/08/pilots-of-the-airwaves-ham-radio-in-perth.html*

The extensive interview had followed earlier media coverage of the ANZAC 100 VK100ANZAC commemorative event held by the VK6 NewsWest organisation, on behalf of the Wireless Institute of Australia.

Government Announces Moves on Spectrum Reform

The Australian Government will implement all the recommendation of the Spectrum Review conducted over 2014-15 by the Department of Communications together with the Australian Communications and Media Authority (ACMA).

Announced on 25 August, a tight program of changes to legislation and regulations will be carried out over the next two years, commencing in October and running through to mid-2017, when the new regime is intended to start.

A single licensing system is the principal feature of what the Government is calling the "new spectrum framework". The current apparatus, class and spectrum licensing regimes will disappear, to be replaced with licences that set out the conditions of use for spectrum access detailed in a set of key parameters.

Known as parameters-based licences, the core parameters to be included in a licence will be set out in the proposed new Radiocommunications Act, with the detail on these parameters to be developed by the ACMA in consultation with users and set out in subordinate instruments. The Spectrum Review recommended that likely core parameters might include frequencies, geographical details, rights to renewal, terms for variation or revocation, together with price and payment methods.

Broadcasters, commercial, defence and other government users, scientific, aeronautical, maritime, private, amateur and other not-for-profit users, as well as type-approved wireless devices, will all be affected by the new spectrum framework.

A review of pricing for spectrum access is to commence immediately and continue until mid-2016. The government foreshadows new pricing arrangements will commence in mid-2017, along with the start of the new licensing system. The next federal election may be held sometime between late-2016 to early-2017.

Message from the WIA President

Dear Members,

In last month's edition of *AR*, I identified the need to review the way the WIA operated to ensure that it continued to meet the needs of the membership. A review of the operation of the WIA office was recently completed and discussed by the WIA Board. As a result it was determined that the existing office structure did not meet our current and future needs. A decision was made to remove the position of Office Manager and replace it with an Executive Officer. As a result Mal Brooks has left the WIA; we thank him for his past service and wish him well for the future.

The Executive Officer position will take a much more active role in the development and implementation of strategies designed to increase membership and improve member services. An advertisement for this role will be published in due course.

Phil Wait VK2ASD

WIA comment

Continued from page 3

WIA. One of the glaring problems we have is that fewer than 50% of members are using the on-line MEMNET system. Sure, there are issues with forgotten passwords and lost membership numbers, and some members' email addresses are incorrect, but if we can get it to work properly with your help, the MEMNET system offers very significant savings on postage and membership administration time.

So, please log into MEMNET from the WIA website and spend a little time to set-up a user profile or to check that your recorded details are correct – particularly your current email address.

Editorial

Continued from page 2

countries already having access to the band. We will need to watch for news of the conference outcomes.

Such outcomes do not come easily. Many amateurs around the world contribute massive efforts to participate in such major conferences and the many lead up events. Similarly, the various IARU member societies (the WIA here in Australia) support those efforts throughout the lead up to these important events, usually at considerable expense to the bottom line of the organisation.

As noted by our President in his Comment this month, Government will usually only recognise a single peak body. For our hobby, that is the WIA. As we move forward into times of more change, in my view every amateur should be supporting the peak national body by being a member, thereby strengthening the ability of the national body to represent us, the members and amateurs.

Until next month,

Cheers,

Peter VK3PF

VI0ANZAC on air despite challenges

Jim Linton VK3PC

A view of Davis Base. Photo courtesy of Australian Antarctic Division.

Despite adverse winter Antarctic weather conditions the VI0ANZAC event in the Wireless Institute of Australia (WIA) ANZAC 100 program made it to air in late August, with poor propagation enabling a total of 56 contacts to be logged. Those who had a QSO with VI0ANZAC were very pleased to be part of the WIA commemoration of the 100 years of the ANZAC (Australian and New Zealand Army Corps) landing at Gallipoli, Turkey. The operator Doug VK0DMV had been eager to use VI0ANZAC, but an earlier plan was postponed much to his disappointment when a storm struck with its high wind, a blizzard cutting visibility and freezing temperatures.

Doug VK0DMV described that storm as having wind reaching 112 knots and a fair bit of damage was caused, including to the antenna. He added: "There is always some damage after these sort of blows - this is the worse to date this year." However, it did go ahead on August 29-30. Sheltered in the antenna shack with a 50 watt transceiver was Doug VK0DMV. Because of the wind, he had to first obtain official permission before venturing outdoors. He spent the night there because winds were at 80 knots. Doug said: "Lots and lots of noise ... but there were some very clear signals from mainly Queensland (VK4) which was a good break from the noise in the background".

He expressed sincere thanks to all those who contacted him and for a great couple of days. Many more listened or had signals too weak that could not be heard. Doug sent his apologises for havin to leave early on Sunday, but a break in the weather was taken to get out of the antenna shack. "Even then it took me around 45 minutes to get back, as the ice build-up on the windscreen dropped the visibility back to less than 3 metres. Regular stops just to clean the build-up of ice/snow from the windscreen (wipers did not do anything), he said. The win had started to decrease below 50 knots on Monday with very little snow and wind, appearing to be o

he decrease that would allow normal work activities to ccur.

There were a number of callers who asked about Doug's VK0DMV callsign as well, once he started using ne VI0ANZAC callsign. The QSL information for both re on QRZ.com VI0ANZAC log sheets will be loaded n to the eQSL system and also submitted to enable erification of contact with Casey Station VKFF-571 by ark Chasers. A special QSL card will be generated for is event.

The WIA expresses sincere thanks to Doug VK0DMV nd his sterling effort as part of ANZAC 100, and to the ustralian Antarctic Division for their assistance that ade it all possible.

While the world is commemorating 100 years ince WWI (1914 to 1918), in Australia the WIA has run ommemorative stations with a suffix of the protected ord 'ANZAC'. The main activity continues until ecember 20, this year.

However, at the WIA annual meeting on Norfolk sland (VK9) on May 27, 28, & 29 2016, both K100ANZAC and VI9ANZAC are to be on air.

D-STAR repeater active in Mackay

Varatah Swinton VK4BQ

K4RBY 146.650 MHz is located at "The Black lountain" home of the 9100 IRLP reflector. The D-STAR epeater licence is registered with ACMA. Thanks go to oug Waterson VK4DW, Theo Kalkandis VK3AP, Icom ustralia and RCS. Amateur radio operators in Mackay an soon experiment with the digital D-STAR mode on metres. The systems is operational, so now is the time start looking to upgrade and purchase a D-STAR ompatible radio from Icom.

What a great opportunity to start moving from ne days of analogue radio to digital modes. Mackay mateur Radio Association encourages everyone to et on board and buy a D-STAR compatible radio and ecome part of the digital age in amateur radio.

Foundation licence holders that have been onsidering an upgrade... what better reason D-STAR!

This is the first stage of an incremental roll out of -STAR around the Central Queensland area. We have cence applications pending for Sarina (now operational) nd Blackdowns Tableland near Emerald.

ditor's Note: This article was originally submitted some me ago, but was misplaced in our system. We have odated some of the details. Our apologies for the delay publication.

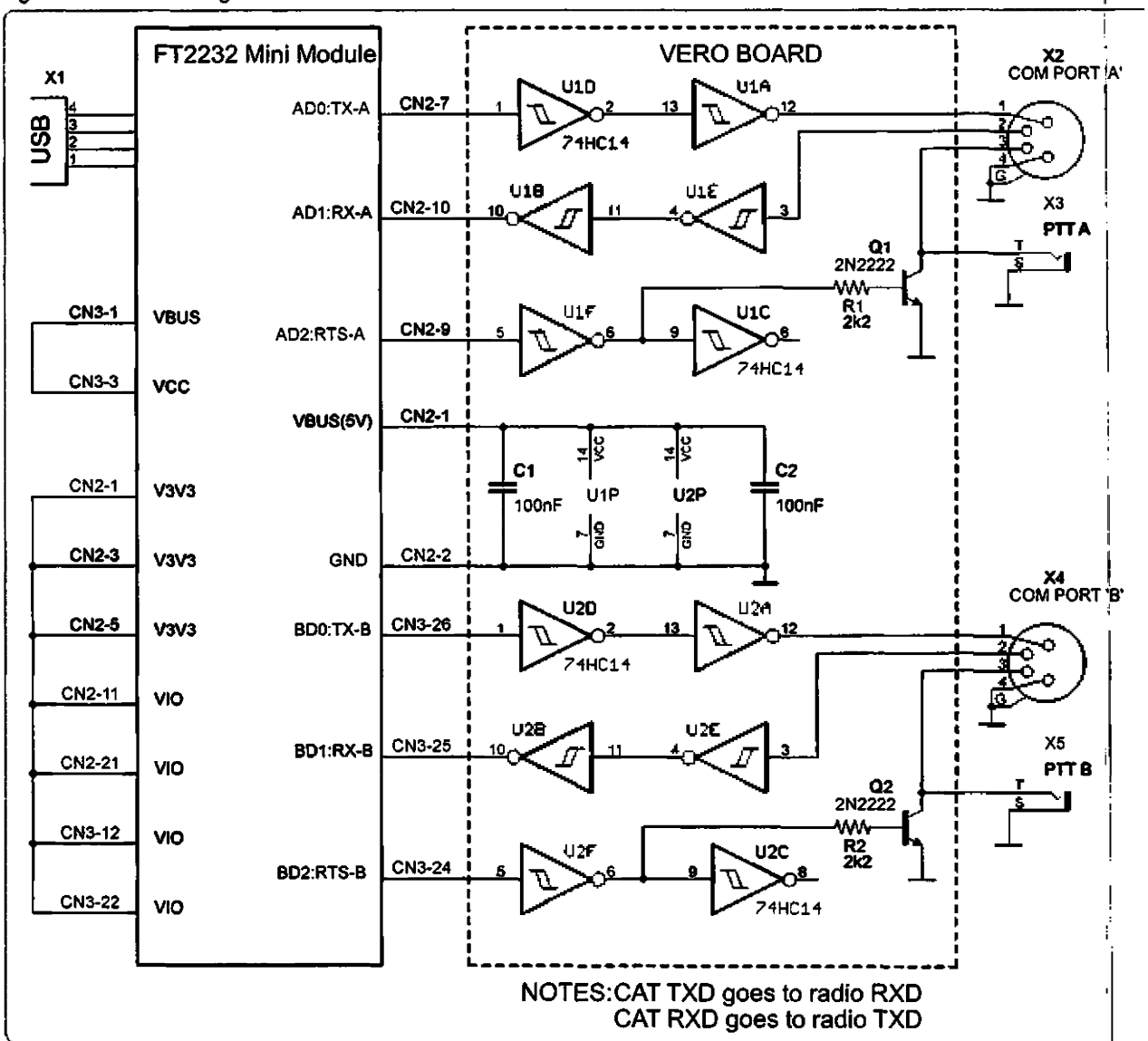
A dual channel CAT interface

Dale Hughes VK1DSH

I recently became interested in using amateur satellites and setup a station using two FT-817 transceivers. One transceiver is used for the up-link and the other for the downlink; while not completely ideal it was significantly cheaper than buying a full-duplex satellite capable radio. Having solved various antenna and control issues I found the next biggest challenge was dealing with the Doppler shift of the signals which can exceed +/- 10 kHz during a complete satellite pass. While manual tuning is possible it does make the process of having a QSO rather more complicated. As the FT-817 radios have a CAT (Computer Aided Tuning) interface which allows remote control of frequency setting it seemed like a sensible idea to implement automatic Doppler correction from the satellite tracking software to simplify the process of having a contact.

The PC used to control the satellite ground station is a laptop with no conventional RS-232 communications ports, so the USB ports have to be used for serial communication. Of course suitable interfaces can be easily purchased, but they are not difficult to build either so this short article describes one way of doing it. The core of this

Figure 1: Schematic diagram of the dual channel CAT interface.



project is a FTDI 'USB 2.0 Hi-Speed Mini-Module' from RS Components *http://au.rs-online.com/web* The RS catalogue number of the dual channel unit is 730-0142. This device provides two independent virtual COM: ports from a single USB connection and a four port device also exists (RS Cat. Number 730-0146) if you need more COM ports.

The complete interface is shown in Figure 1; the FTDI module does most of the work with a number of other low cost components being used to shift levels for the serial communications and PTT interface. As the FTDI module uses 3 V logic but has 5 V tolerant inputs) two 74HC14 hex-inverter chips are used to interface between the 3 V and 5 V levels. Two transistors are used as open-collector switches for controlling the radio PTT inputs if required.

The FTDI module was mounted on a small piece of 'VERO board' along with the other components.

A minor complication is that connections to the FTDI module are through two rows of dual 24 pin headers which make connection to the VERO board circuitry difficult so the unwanted or unused pins were cut off the FTDI module to simplify the process of soldering the module to the VERO board. The completed unit is housed in a small metal box with two 4-pin DIN connectors for connection to each radio. For non CAT applications, the PTT lines are also bought out to separate connectors.

Driver software for the FTDI module is required, but this is found and loaded automatically when the module is first plugged into the PC USB connector. The FTDI website *http://www.ftdichip.com/* has extensive user and application notes, as well as driver software if there are any problems with software installation.

The CAT interface has been used with the popular SatPC32 satellite tracking software *http://www.dk1tb.de/downloadeng.htm* and Fldigi for digital modes *http://www.w1hkj.com/Fldigi.html* and works very well. The same hardware should also be suitable for other types/brands of radios or for other applications where TTL level serial communications is required. If other applications require additional control lines (DTR etc.) they can be easily added to the circuit.

Photo 1: The complete dual channel CAT interface.

A two transistor two band junkbox regenerative receiver

Peter Parker VK3YE

Despite the migration of broadcasters and some other services there remains things to listen to on HF. Monitoring can be done online, with a software defined radio or the general coverage section of your transceiver. However for casual tuning around there is still much to be said for a stand-alone receiver.

Presented is possibly the simplest practical receiver for HF listening. It uses just two transistors plus an optional IC audio amplifier. Its two bands cover the busiest part of HF spectrum (3 – 23 MHz). The regenerative circuit, common in the early days of radio, is sensitive enough to hear international stations.

Overall performance won't set the world on fire. Tuning ease, selectivity, stability and dial accuracy isn't up to modern standards. Nevertheless simple

Photo 1: Front panel of 2 band regenerative receiver.

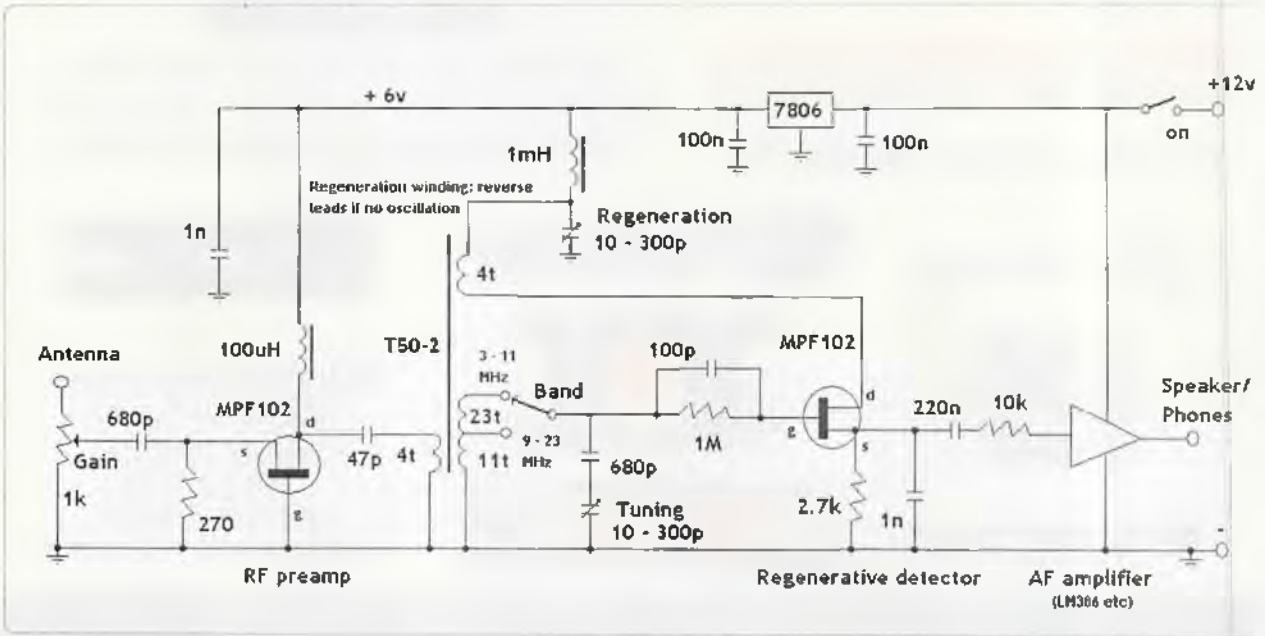


Figure 1: Circuit diagram of 2 band regenerative receiver.

straight' receivers have a leasing purity of sound that nake listening a joy. There s also the satisfaction of earing signals from around ne world on a set you built ourself.

Circuit description

here are two main stages. ncoming signals from the ntenna are passed to an RF ain control that also sets the olume. They are amplified y a FET RF preamplifier and oupled to the regenerative etector via a primary inding on the toroidal uning coil.

Signals are selected by ne tuning coil (in conjunction ith its parallel tuning apacitor) and fed to a egenerative detector, which ses another FET. This stage ombines RF amplification and onversion of the selected radio ignal to audio in the one transistor.

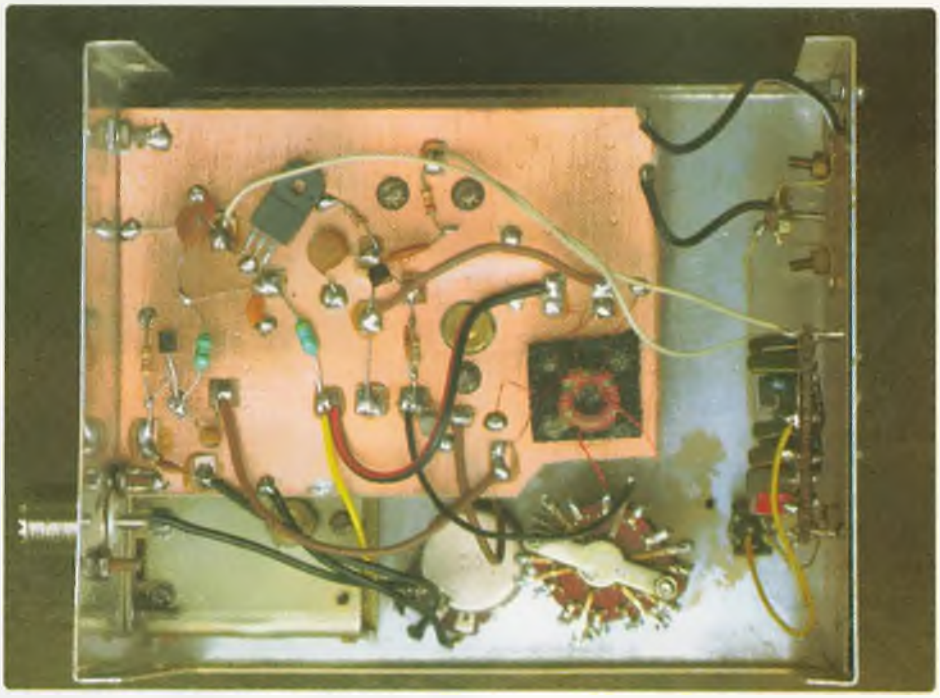


Photo 2: Inside the two band regenerative receiver.

Positive feedback, provided by feeding part of the detector's output back to the input (via the regeneration winding) greatly increases gain. The feedback required varies with frequency and

is adjusted with a second variable capacitor. The receiver breaks into oscillation past a certain amount of regeneration. This is handy for receiving CW and SSB signals and calibrating the dial with the help of another receiver.

The coil determines the receiver's frequency coverage and much of its performance. It has three windings, as follows:

- The primary winding from the RF preamplifier
- The regeneration or feedback winding
- The tuning winding which takes up most of the space on the toroid.

More turns on the tuning winding increase inductance and lower the frequencies which can be tuned. Conversely fewer turns mean coverage of higher frequencies.

Two tuning ranges cover most HF frequencies. The band switch selects these by having all the tuning coil in the circuit (lower range 3 – 11 MHz) or part of the coil connected (higher range 9 – 23 MHz).

Signals can be heard with a high impedance crystal earphone was connected to the detector's audio output. However adding an IC audio amplifier using the common LM386 is recommended and will deliver speaker reception of the stronger signals in a quiet room. Alternatively, use a module salvaged from a transistor radio or computer speakers.

Eight or more volts DC will power the receiver. A 7806 provides voltage regulation to aid frequency stability. This is particularly important for the oscillating regenerative detector when it is receiving CW/SSB signals.

Parts availability

This is a 'junkbox' project so you won't find all parts at the standard outlets. Hamfests, VKHam and eBay are good sources, with prices generally highest with the latter.

Photo 3: Close up of coil and band switch.

You can replace the recommended air dielectric variable capacitors with newer plastic types. And the vernier reduction drive on the main tuning control could be done away with if you're willing to tolerate fiddly tuning.

Suggestions for those without a vernier reduction drive include the following:

- Use a large knob on the variable capacitor for easier tuning
- Glue a lever (eg chopstick) to the tuning capacitor knob for easier tuning
- Building your own reduction drive using a spindle, rubber grommet and disc
- Install a low value bandspread variable capacitor across the main control
- Accept reduced tuning range (e 3.5 – 3.8 and 7 – 7.3 MHz only) by using parallel and series fixe capacitors around the tuning capacitor. Much 'cut and try' will be required here.

The T50-2 iron powder toroid is normally available from specialist RF suppliers but not general parts outlets. Common ferrite types should not be substituted. If you can't obtain one consider an air cored solenoid cylindrical type coil wound on glass, cardboard or rigid plastic tubing about 20 - 30 mm in

iameter. With both styles of coil ou will need to experiment with urns but a good starting point is round 20 or 30 turns on the tuning oil for a frequency range suitable or night time listening.

The wire used for winding needs be fine enamelled copper type. omething under 0.2 mm diameter hould be thin enough to wind onto ie toroid without overlap. Thicker ire is permissible if not using a toroid. oth types can be salvaged from old ansformers or purchased new.

The rest of the parts should be ommonly obtainable.

Construction

olid construction is essential for ood frequency stability, especially or SSB reception. Use a metal ox rigid enough not to flex. Parts an be soldered to the copper side f a piece of printed circuit board aterial with island pads made from mm squares of board material lued on to the main board to upport non-earthed connections. ires, especially if carrying RF, hould be short to lessen stray ductance and capacitance. The udio amplifier can be built on a mall piece of matrix board, or kept n its own board if salvaged.

The coil is the fiddliest part of uilding the set. Experiment with ie number of turns to optimise equency coverage with your ariable capacitor. Keep it some istance from metal, especially using a solenoid type coil. ie smaller RF coupling and generation coils are wound past ie ends of the main tuning coil. gain these may need tweaking allow regeneration across all ceived frequencies with the vailable regeneration capacitor.

Photo 3 is a close-up of the and switch and coil. You will see at the toroid is glued to anti-static am (such as comes with ICs) to ford shock resistance and make ie receiver less microphonic.

Flexible coupling between the ernier reduction drive (if used) nd the shaft of the main tuning capacitor is desirable. This is to compensate for any misalignment between the two. Flexible couplers can be salvaged from old radio equipment or made from rubber tubing and metal clips.

No flexible coupler was used in my receiver. It worked well enough with the case apart. However closing the box caused the vanes of the tuning capacitor to short when it was near fully meshed. This made the receiver annoying to use and lessened tuning range. The problem reoccurred when flexing the open case. The fault was caused because the capacitor's rotor plates touched the stator plates when stress was placed on the shaft relative to the capacitor's body. Slightly repositioning the circuit board partition used to hold the variable capacitor cured the fault.

Apart from that construction is easy but keep all parts easily accessible for the inevitable component substitution, coil changes and experimentation.

Testing and use

Connect power, full-sized outdoor antenna and headphones. Set the band to the lower range, with the whole tuning coil in the circuit. Adjust tuning so its plates are fully meshed (ie maximum capacitance) and regeneration to minimum capacitance.

The receiver should initially be silent but advancing the regeneration control should cause a gentle hiss. Hearing this shows the receiver is oscillating. Adjust the main tuning control to confirm the set can be brought into oscillation over its entire tuning range on both bands.

If regeneration isn't possible on all spots of the tuning dial the coupling between the small regeneration coil and the main tuning coil may be insufficient. Add more turns to the regeneration coil until oscillation is possible over the full range.

Failure to get oscillation on any part of the dial means the regeneration coil is wrongly connected. Swap its ends and try again. Add more turns if you're only getting oscillation over part of the tuning range, as described above.

With the set lightly oscillating try tuning for signals. You'll hear most at night. Carriers are likely to be shortwave AM broadcast stations. Back off the regeneration and retune slightly for best clarity.

The stronger stations should provide comfortable speaker reception in a quiet room.

Somewhat weaker will be amateur SSB and CW signals. These will be very hard to tune in unless you're using a high reduction ratio dial drive. Back off the RF gain control to resolve the stronger SSB signals.

The receiver at this stage may be a mess inside and won't have control or dial markings. Avoid any rush to complete. Instead spend an evening or two tuning both bands end-to-end, savouring the unhurried sweep through unknown frequencies. By recognising familiar nets, broadcast signals and time stations you'll eventually get an idea of where you're tuned.

When tuning around check if the same stations are audible in the top half of the lower frequency band as the bottom half of the higher range. If there is a large overlap change the number of turns on the tuning coil to lessen it.

Because wide range receiver dials are non-linear and frequencies are spread out more near the bottom of the tuning range, it's a good plan to arrange the coil value and tapping point so that 3.5 MHz is near the bottom of the lower frequency band and 7 MHz to appear at the bottom of the higher band. This improves tuning ease for the two amateur bands most likely monitored. The main shortcoming is sacrificing 21 MHz coverage, depending on the value of the tuning capacitor.

If lower frequencies are preferred use coils with more turns. A 1.6 to 4 MHz range covers AM narrowcasters, ABC central Australia transmissions plus the 80 and 160 metre amateur bands. The higher range could be similar to the lower range on the prototype, allowing reception of WWV/WWVH, several broadcast bands, several amateur bands and coastal weather stations. It's a particularly good segment to tune at night, though you will miss some higher bands which the unit described covers.

There are several ways to establish the receiver's exact tuning range and calibrate its dial. One is to use an RF signal generator. Another is to use a general coverage receiver with its antenna connection brought to near the regenerative set. The latter works because bringing the set into oscillation causes it to radiate a weak RF signal audible on the calibrated receiver. Just be wary that you are tuned to the fundamental of the signal from the regenerative receiver rather than a higher frequency harmonic.

If your vernier reduction drive has a 0 to 100 scale you could make a look-up sheet listing frequencies and the dial reading. Or, if it has a pointer, cut a scale from A4 paper sheet onto which tw concentric semi circles have been drawn (or printed). The frequency, in megahertz steps, can then be marked on it with pen during calibration.

Conclusion

A receiver that covers most HF frequencies has been described. It can be built in a day for minimal cost. While by no means high performance, its two transistors will pull in an impressive number of signals from around the world.

Reference

AA5TB's Regenerative receiver
http://www.aa5tb.com/regen.html

Visit to HV0A Vatican City May 2015

David Long VK3BY

My wife and I had planned a trip o Italy late in 2014. This was a ackaged trip for 13 days starting ate April 2015 visiting the usual opular destinations starting in lome. By chance in November f 2014 I was able to contact rancesco HV0A/IK0HVC on 20 m nd asked the question *"any chance visit the station while I am in ome"*. Francesco replied *"drop e an email and we will see"*. After series of emails back and forth date for the visit was arranged unday 3rd of May 2015.

hoto 1: Francesco HV0A-IK0FVC.

The station is located in the ontifical North American College uilding minutes away from Saint eter's Square. Francesco has been ie station manager and licence older since 1992 (23 years) and is sponsible for station maintenance, SLing and any other bureaucratic uties that are required to keep ie station operational. Remember is is not a Home Station but the atican State Station, a couple f hours on air equals more than ouble that time in paperwork, SLing etc. He also receives any requests from amateurs all ver the world to visit this station nd while he is not always able to ccommodate everyone, I was very onoured to be the first VK to visit nd operate from the station.

Photo 2: HV0A Antenna setup.

The day for the visit had arrived and a quick trip on the train and a short walk past Saint Peter's Square and there was Francesco waiting for us. The Radio Shack is located on the upper level of the building and consists of an Icom Transceiver, SPE Amp and a SteppIR antenna at about 30 metres above the ground. From just outside the radio shack you have a magnificent panoramic view of Rome.

Francesco checked the station for operation then handed the microphone over to me to call. I had prearranged to send an SMS to VK3MEG to notify what frequency we were operating on and was able to work some VK-ZL stations (including the boys on Norfolk Island VK9NT) before the EU pile up started. Last year I operated for a week from T88 but that was nothing compared with the pile up and signals received from here. Most EU stations were +20 dB or more and even though you pick out a call and try and make the contact everyone else keeps calling.

Altogether I had about two hours on air and worked over 100 stations, some for a new one. The signals and QRM from Europe was very strong making it difficult to pick out the weaker stations and I now have a better understanding of the conditions when trying to call EU stations from home.

After seeing places like the Colosseum, Sistine Chapel, Leaning Tower of Pisa, Pompeii etc., a visit to HV0A was the perfect way to complete our Italian Holiday (for me anyway). The only downside was my camera failed me in Venice and we had to take our pictures using a tablet and mobile phone. Some of the pictures did not turn out as well as we expected.

Whenever I am on holidays, I like to try and catch up with radio operators from the countries that I visit. I was also able to meet with Filippo IC8POF on the Island of Capri and Maurice KG6MFT who was part of our tour group.

I would like to express my sincere gratitude to Francesco for taking the time out of his busy schedule for first allowing me to vis the station and second giving me some time on air.

Photo 3: David Long VK3BY operating the station.

Photo 4: View of Rome from HV0A with St Peter's in background

Thomas Robbins VK5DK/VK5AQ

loyd Butler VK5BR

Power Systems Engineer, Radio Amateur, Australian Navy Lieutenant, survivor of the HMAS Perth torpedoed and sunk in World War 2, and Prisoner of War by the Japanese.

ntroduction

his is a life story of Tom Robbins ased mainly on information upplied by his son Peter VK5NAQ. is supplemented by information n the sinking of the HMAS Perth nd the Zentsuji Prisoner of War amp, as listed in the References at ie end of this article.

The article works progressively rough phases of his life. Firstly, we iscuss his introduction to amateur dio, his training in engineering, nd his introduction to the Navy. is experiences during the war e quite epic and after the war, he turned to work as an engineer in ie Adelaide Electric Supply and the lectricity Trust of South Australia.

efore the War

homas Fellows Robbins was orn in September 1918 when s parents lived in the Adelaide burb of Unley. He was educated t Highgate Primary School and the delaide Technical High School. At ie High School in 1933, he was warded the Sir Langden Bonython ledal for being dux of the year. is course at the technical high chool, favoured subjects related engineering which no doubt led m to later choose a career in the ngineering field.

At secondary school, Tom xcelled in technical drawing nd on completing his secondary chooling at the age of 15 years, e obtained employment as an ssistant draughtsman with the delaide Electric Supply Company ESC). When of age to enter niversity, he commenced study for n Engineering degree which was completed by the time World War 2 commenced.

But Tom was also fascinated with field of radio communication and amateur radio. He was able to qualify for his Amateur Operators Certificate at the age of 17 years with the certificate issued on the tenth of September 1935. One month later, on the tenth of October, he was issued his experimental licence with call sign VK5DK. The licence authorised a power of 25 watts at the location of Church Street, Highgate.

The Wartime Era

World War 2 started in 1939 and by around 1940, Tom had enlisted in the Australian Naval Reserve. He joined as an Engineer and was appointed to the rank of Engineer Sub-Lieutenant on February 28, 1941. He completed initial training at HMAS Cerberus which is the Navy's training establishment, 70 km from Melbourne. After completion, on July 18, 1941, he was posted to HMAS Perth.

HMAS Perth was built at Portsmouth Naval Dockyard and commissioned into the Royal Navy as HMS Amphion on 15 June 1936. She was purchased by the Australian Government and was commissioned into the Royal Australian Navy (RAN) on 29 June 1939. She was a light cruiser with eight 6-inch guns, eight 4-inch dual purpose guns, a number of automatic anti-aircraft weapons and eight 21-inch torpedo tubes. She also carried a Seagull V aircraft for reconnaissance and spotting duties.

HMAS Perth had seen war service in the Caribbean, the

Sub-Lieutenant Thomas Robbins 1941.

Photo of HMAS Perth taken the day before it was sunk.

Pacific, and the Mediterranean, in 1940 and 1941 and following battle scars, arrived in Sydney for refit in August 1941. This seems to be about the time that Tom joined the ship with Captain H.M. L. Waller in command.

The ship had a number of encounters with the Japanese during the 1941/1942 period. But it met its match when crippled by several torpedoes in the Sundra Strait, Java Sea, Indonesia on the night of 28 February 1942. Starting at 11.55 pm, she was hit by four torpedoes from Japanese ships over a period of 15 minutes. She turned over and sank at 12.25 pm on March 1. Between the second and third torpedoes Captain Waller gave the order to abandon ship. During the abandon ship operation, the Perth was under fire from many destroyers at close range and many hits were sustained which caused casualties. Many of the crew were killed or wounded in the water by the explosion of the last two torpedoes and by shells exploding in the water. More detail of *"The Battle of Sunda Strait"* can be found in references 1 & 2.

Of the Perth's company of 686, only 218 were eventually repatriated. The remainder were killed during, or soon after the action, or died as prisoners of war. Tom survived, but Tom's son Peter said that Tom didn't talk much about the action. However related one event in the water after the ship went down and he tried to save a shipmate. He held him in the water until morning only to find that the lower body had been eaten by a shark and the shipmate had died during the night.

Tom was taken by the Japanese as a prisoner of war (POW). He arrived at the Zentsuji war camp in September 11, 1942 where he stayed for three years until the war ended in September 1945. It is not clear where they held him between the time when he was taken as a survivor from the Perth and the arrival at Zentsuji. This POW camp

Lieutenant Thomas Robbins, Prisoner of War, Zentsuji Camp.

was apparently used as a type of show camp by the Japanese for propaganda purposes where Officers from Guam and Wake Island were mainly held. Prisoners were possibly treated a little better than camps such as the Singapore goal, "Changi" or the Burma Railway. However Tom reported that life was not that easy being locked up for three years and working in slave-like conditions. The primary slave labour tasks carried out by the inmates of the Zentsuji POW Camp were stevedoring roles at Sakaide Rail Yards and the Port of Takamatsu. Tom had also reported working in a mine.

The atomic bomb was dropped on Hiroshima in August 6, 1945, around 30 km from Zentsuji. At that time, Tom was still in the POW camp. Tom developed lung cancer later in life and one must wonder whether Tom received some of the radiation emission which might hav contributed to this condition.

In the article "The Road Back" (Reference 3), Tom relates the strange activity of the camp guards when war ended in 1945 and the surrender of the Japanese. It was clearly exciting to go home, 300 miles by train, a number of RAN ships to Sydney and rail again via Melbourne to Adelaide.

Tom arrived back in Australia on September 27, 1945 and was posted to naval depot HMAS Torrens, Port Adelaide. Tom was demobilized from there on January 18, 1946.

Location of Japanese POW camps, including Zentsuji.

After the War

Tom returned to work for his old employer the AESC, now as an engineer, not as a draughtsman. Over the years the Leigh Creek coalfield had developed and the State Government wanted to make use of its brown coal to generate electricity. AESC had a monopoly on the generation of electricity in Adelaide and refused to modify their power stations to take the brown coal. Tom Playford was the State Premier at the time and he managed to get through Parliament a Bill to nationalise the State electricity supplies So in 1946, Adelaide Electric was taken over by the Government

and became the Electricity Trust of South Australia (ETSA).

Tom never forgave the Japanese for the suffering he and other Australians had endured at hands of the Japanese when the Australians were prisoners of war. However he did return to Tokyo with his mother who attended a conference there. Whilst meandering in the city, he bought a handheld radio transceiver. Sitting on a park bench, he attempted to work out its operation from the instructions written in Japanese. Expressing his frustration in broken Japanese, drew the attention of a young Japanese citizen who sat down beside him and provided some help. As it turned out, the young chap was a Japanese radio amateur with whom Tom continued contact until the days Tom became a silent key.

Tom married his wife Margaret in February 1946. In 1948 Tom transferred to the Coal Production Department of the newly formed ETSA and this began an extended association with Leigh Creek. He worked in Leigh Creek for 13 years, first employed as a mechanical engineer, then as a field manager, and later as field coal production engineer. Leigh Creek was fairly primitive at that stage. There were only eight permanent houses in the town and and tents housed about 200 workmen. There were only five privately owned cars and there was a galvanised iron shed on the outskirts which served as a store. They had a 30% turnover in workmen from a workforce of 300. Many members of the workforce were new migrants from overseas. Road conditions were poor and the old narrow gauge railway to Alice Springs, stopping at Telford siding, was subject to flooding.

Development was boosted when a large dragline excavator arrived on the coalfield. This second-hand machine, with a 2.5 cubic metre bucket, bought from a Dutch construction company in Melbourne, was dismantled, completely overhauled, and re-assembled at Leigh Creek.

Dragline Excavator, Leigh Creek Coal Field, circa 1950 - early photo by VK5BR.

An airfield was completed at Leigh Creek about two kilometres north of the town with two graded runways. Sealing of the runways was arranged by the Department of Civil Aviation (DCA) in 1950. On 26 September 1950, the inaugural flight to Leigh Creek from Parafield, was made by Trans Australia Airlines (TAA). A technical team from the DCA, led by Lloyd Butler VK5BR, installed new aeradio facilities at the aerodrome. Leigh Creek took over from Mt Eba as the staging stop for refuelling the piston-engine airliners of that day.

By 1954, Peter and Margaret had added son Peter and daughter Margaret to the family. When not occupied with his employment and family tasks, Tom kept himself busy with the Scouting movement, amateur radio and RSL matters. He had also become a Justice of the Peace (JP). Margaret became involved with the Country Women's Association, had charge of the local library, and managed the social welfare of the migrant women in the town. For a short time, Margaret also taught at the local school.

As the years progressed, ETSA developed from the old Adelaide power system to gradually cover the whole State of South Australia. They provided alternating current to towns, which previously had local direct current supply, and also extended power to farming areas. At Leigh Creek, Tom had become Field Coal Production Manager. But in 1962, Tom was promoted to become the first Regional Manager for ETSA in South Australia and the Robbins family moved from Leigh Creek to Port Augusta. Whilst in Leigh Creek he was essentially concerned with coal production, he was now responsible for power generation and power distribution.

In the larger town of Port Augusta, Tom was able to develop further his community interests. He was considerably involved with Legacy and the interests of war widows. He also extended his role as a JP to that of serving on the Court Bench. Margaret developed interests in the School of the Air, the Country Women's Association of the Air, Remote and Isolated Children's Education and Meals on Wheels.

After returning from the war, Tom renewed his interest in amateur radio and took up the new call sign of VK5AQ. He helped many young people in Port Augusta get their licence and is remembered by operators as far south as Balaklava and Adelaide. Tom's son Peter has a plaque of appreciation for the help his Dad gave in setting up the 2 m Repeater on Mt Bryan.

Peter always remembers his dad's pipe. Even Peter's son, now a Radio Tech in the RAAF, had always said: his only memories of his grandfather are those of him sitting in the radio shack on his father's knee, whilst grandfather talked on 160 m and via Earth-Moon-Earth path (EME). He claims: Grandfather would send an over via EME, then go outside for a drag on his pipe. Due to the return signal delay, he would miss nothing of the QSO.

Tom retired from ETSA in 1978 at the age of 60 years. But life in technology continued with his favourite interest of constructing gear for amateur radio and amateur radio communication, including operation via Satellite. With the

advances in technology, he studied the principles of computer science and helped others by coaching them in radio theory and radio practice. One of those he helped was his son Peter who he was able to see qualify in his operators certificate and gain his amateur radio licence.

Unfortunately, in later years, Tom developed lung cancer. As a result of this, Tom joined the Silent Keys in 1987 at the age of 67.

Summary

Indeed Tom served his country well. He could well have been one of those of the crew of the HMAS Perth who were killed by a torpedo or drowned at sea. But he survived to return and become one of the leading engineers in our South Australian power supply companies. From all accounts, he also became involved in considerable community work in the country towns of Leigh Creek and Port Augusta.

However there was always his favourite past-time amateur radio. He had an amateur licence from 1935, when he was 17 years old, to the day he left this earth in 1987. Tom certainly qualified as a radio old timer with 52 years of amateur service.

Thanks to Peter Robbins for bringing the history of his father to the attention of the WIA ANZAC 100 Series.

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3. The Road Back by Tom Robbins "The Adelect", journal of the Adelaide Electric Company, September 1944?.
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5. The atomic bombings of Hiroshima and Nagasak: *http://www.abomb1.org/hiroshim/hiro_med.html*
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AMSAT-VK

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About AMSAT-VK

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

AMSAT-VK monthly net

Australian National Satellite net

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

In New South Wales
VK2RBM Blue Mountains repeater on 147.050 MHz

In Queensland
VK4RIL Laidley repeater on 147.700 MHz
VK4RBC Redcliffe 146.925 MHz IRLP node 6404, EchoLink node 44666

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

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

In the Northern Territory
VK8MA Katherine 146.700 MHz FM

Operators may join the net via the above repeaters or by connecting to EchoLink on either the AMSAT or VK3JED conferences. Past experience has shown that the VK3JED server offers clearer audio. The net is also available via IRLP reflector number 9556. 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.

Plan Ahead

Ballarat Amateur Radio Group (BARG) Hamvention 25 October

WIA Calls for Special Purpose Grant proposals

WIA Board

Until recent years monetary grants were provided by the WIA to Affiliated Clubs, where Clubs submitted their proposals to an independent selection committee. Over the years the Club Grants scheme ran its course, with fewer submissions received in the later years and sometimes for fairly low-grade project proposals. The last WIA Club Grant was awarded in 2013.

In 2014 the WIA introduced a new WIA Special-Purpose Grant which was designed to be more closely aligned to the Boards strategic policy for the development of amateur radio. WIA Special-Purpose Grants are available to affiliated clubs and individual members. They are also be open to non-members and non-affiliated organisations, so long as the project is for the benefit of amateur radio and the non-member or non-affiliated organisation contributes at least 50% of their own funds, with the WIA contribution paid retrospectively on completion of the project or at an agreed project stage.

The WIA will only contribute to projects that are in accordance with the strategic direction set by the WIA Board, and announced early, prior to the call for project proposals. Grants may not necessarily be awarded on a yearly basis, though yearly grants are expected to be the norm unless a major development project requires funding over several years.

The first WIA Special-Purpose Grant was awarded in support of the Beacon GPS-Locking Project, which is now complete.

The WIA now calls for project proposals to the second round of WIA Special-Purpose Grants. This year's strategic direction is:

The advancement of amateur radio in Australia through innovation, experimentation and education.

The project should be new, realistic, achievable within 12 months from the date of the grant or partly achievable through a staged process, and should broadly benefit amateur radio in Australia. Complex projects with developmental risk can be staged over several years with ongoing funding dependant on meeting staged targets. An example of a staged process may be: concept development and regulatory investigation – proof of concept or prototype – technology roll out - publication in *AR* magazine.

The WIA Board has allocated up to $6,000 for this round of grants.

Each project will be vetted by an independent committee comprising Peter Freeman VK3PF (Committee Leader and your *AR* Editor), Scott Watson VK4CZ, Gary Beech VK2KYP, Drew Diamond VK3XU and Peter Hartfield VK3PH, bringing a diverse range of skills and perspectives. The committee will evaluate proposals based on: benefit to the amateur radio community; not for-profit or non-commercial nature; stage of completion at the time of the application; likelihood of being completed within 12 months; and consistence with the WIA Board's specific criteria (i.e. strategic direction). The Board has not placed a quota on the number of grants per year.

Applicants should refer to the WIA Special-Purpose Grant Rules, and the Flowchart which explains the selection process.

The closing date for Grant submissions is 18 December, 2015. We look forward to some interesting projects in the years ahead. Please send your project proposals to:

Special-Projects Grants Committee
Wireless Institute of Australia
Unit 20, 11-13 Havelock Road
Bayswater, Vic 3153

Or Email your proposal to:
nationaloffice@wia.org.au

Erratum

In the print edition of the September issue of *Amateur Radio*, we failed to ensure that the callsign of Waratah Swinton VK4BQ was included in the Table of Contents and with the article, which appeared on page 15.

I have already emailed my apologies to Waratah, and have ensured that the corrections were made to the Digital Edition of the magazine.

Editor.

Cup Day radio display

Tony Falla VK3KKP

The Castlemaine Pioneers and Old Residents Association Inc. regularly open the Castlemaine Telegraph Station for the public viewing of their collection of telegraphy equipment and documentation, and also run an active Morse telegraphy station periodically to demonstrate legacy telegraphy technology.

This year they have approached me to coordinate a simultaneous exhibition of wireless telegraphy through the ages featuring an operational amateur radio station. This is a rare opportunity for the radio community to have such a public presence in the Castlemaine area and beyond.

The radio display will be in the Telegraph Station itself with the early telegraphy display in the adjoining Faulder Watson Hall and both will have documentation and equipment on display to educate the public about past and present techniques to communicate electronically.

The exhibition will run from 10 am to 5 pm on the Cup Day weekend and the following Monday and Tuesday.

People interested in assisting in the preparation and the operation of the displays on the day are welcome to contact me as soon as possible.

Typical tasks would include:

- Lending old and new equipment for display. Lending QSL cards and other memorabilia.
- Providing equipment to set up HF and VHF stations for demonstration purposes.
- Setting up antennas and equipment prior to the event.
- Operating a radio station.
- Talking to the public generally and explaining what the operators are doing and why, while supervising the exhibition
- Providing contact details of local clubs and the WIA and collecting expressions of intere in amateur radio.
- Providing contacts from home t demonstrate a contact.

This will not be a contest or specia event station. It is a demonstration station to educate the public about the history of radio communication

Any person who offers to help at the Telegraph Station will be required to register as a volunteer of Castlemaine Pioneers and Old Residents Association Inc. for the duration of the event and will be asked to pay $2 to cover public liability.

VK6news

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

Welcome to this month's edition of VK6 Notes, a post Hamfest, post SKD, post IILW busy month!

We have an anniversary to celebrate this month! **WARG** is turning 40!

WARG's 40th Anniversary

Anthony VK6AXB writes on behalf of the West Australian Repeater Group:

2015 marks WARG's 40th anniversary, with our first official meeting taking place in August 1975. To celebrate, WARG are organising a lunchtime BBQ on Sunday October 25th, from 11 am at Wireless Hill Park, off Almondbury Rd in Melville.

At the time of WARG's beginnings in 1975, there were only two or three amateur repeaters in all of VK6, and there were many technical and practical challenges to expanding the number of repeaters and improving their function.

The formation of WARG marked the start of a lot of hard work, and great success in overcoming many of the problems. Repeater sites were built from the ground up, duplex transceivers, cavity filters and controller boards were developed and installed. The repeater network expanded into country areas, and to the 70 cm, 6 m and 10 m bands. The interlinked WIA and News West broadcast system was established, packet digipeaters and APRS were added to many sites. More recently the system has grown to include D-STAR and Fusion digital voice modes.

Hundreds of VK6 Amateurs participated in these various projects over the years, and we welcome all past and present WARG members and supporters who are able to attend on October 25th. We plan to start around 11 am, the usual BBQ fare will be available and donations toward the costs are appreciated.

Bring your appetite, your stories and reminiscences; we would love you to come along in October to help WARG celebrate past achievements, and look forward to the next 40 years. More information is on *www.warg.org.au* or email *secretary@warg.org.au*

So make sure you go along and join in the birthday bash!

Photo 1: Setting up a mast for the ILLW weekend at Cape Leeuwin.

Bunbury Radio Club

Now we will move further south to Norm VK6GOM and this month's contribution from the **Bunbury Radio Club.**

As part of our program to diversify meeting locations, our August meeting was held in Busselton at the Busselton Masonic Centre. It was well attended and attracted two prospective new members Kate and Mark. Mark was a former CB person and is interested in upgrading to the amateur ranks. Following the business meeting, we ran a discussion group on antennas based on members' experience with various set-ups. This was well received.

The next lot of licence assessments will be held on 26 September 2015 at Peppermint Grove Beach Community Centre near Capel. These assessments are available to anyone interested in obtaining an amateur licence or upgrading an existing qualification. Anyone interested in sitting the appropriate assessments please contact Norm VK6GOM on 0438 878 582.

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

As mentioned last month, the club set up a station at the Casuarina (Bunbury) Lighthouse for the International lighthouse weekend on 15/16 August. The weekend was organised by Neil VK6FNKS and Darren VK6FGWN who did a great job of setting things up. The event was well attended and we managed to work 13 lighthouses as well as some RD contesters.

Brian Andrews (VK6TGQ) reported that the Experimenters' Net had successfully received SSTV pictures from the ISS over the weekend of 19 and 20 of July. It was good that three geographical separated members, Steve Boak VK6FSSB, Ian Bailey VK6MIB and Brian Andrews, had been able to collaborate via the BRC Google Group and the Experimenters' Net IRC channel to achieve this success. Currently Brian and Richard Ayre VK6PZT are building Packet Radio stations based on Raspberry Pi computers. These will form the basis of some of the future Experimenters' Net activities. Brian also wants to hear from other members who have a desire to experiment with some aspect of amateur radio.

The next meeting of the club will be held on Saturday 12 September at 1400 at 21 Halsey Street, Bunbury. Visitors are welcome.

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

Thanks again Norm.

News from HARG - The Hills Amateur Radio Group

Our regular scribe from HARG, Bill VK6WJ, has been off gallivanting around the globe and sent in this report before dashing off on his travels.

Here is something worthwhile to put in your diaries. On Saturday 28 November, Mal VK6LC will be giving another of his popular talks at the HARG club rooms. This time it is on propagation – or what will be left of it as we get towards the bottom of Solar Cycle 24. The lecture will start at about 2.30 and run for about 45 minutes, excluding question time. Mal has provided the following notes.

The lecture will run for about 45 minutes, excluding question time and will cover very briefly:

1. *Sun Spot Solar Cycle 24.*
2. *MUF (Maximum Usable Frequency) principles, Frequency layers Day/Night, Antenna angle of radiation, Skip and Grey Line activities.*
3. *Propagation Data (sun spot numbers, Predictions, Indexes etc.) Shack Aids, Internet Clusters and International Beacons. Right now we are on our way down with Solar Cycle 24 and we all must be aware, as we will lose most of the higher Frequency bands.*

A live power point session will be featured with general info and handouts will be made up for distribution.

To note: The study of VHF-HF Propagation Science is a larger subject than the hobby itself.

This should be a very interesting and worthwhile presentation. Everyone is welcome.

Thanks to NCRG for another enjoyable Hamfest on 9 August. HARG managed to sell a worthwhile number of items from our four fully laden tables and like many other traders we gave away for free whatever was left at the end. On Saturday 15 August, HARG operated a field station from the North Mole Lighthouse in Fremantle for the International Lighthouse and Lightship Weekend. We also participated in the RD contest.

HARG Meetings are held twice a month at our club rooms at the Paxhill Guide Hall near the corner of Brady and Sanderson Roads in Lesmurdie. Our Social and Practical meeting is held on the second Saturday of the month and our General Meeting, often with a technical talk, on the last Saturday of the month. Doors open at 1.00 pm for a barbecue lunch and the meeting starts at 2.00 pm. More information at *www.harg.org.au*

Cheers from Bill VK6WJ Publicity Manager for HARG.

Thanks Bill, I hope the trip went well.

Capes Lighthouse Radio Group

The IILW weekend was an opportunity for a newly formed group to try their skills, and Anthony VK6AXB explains:

Photo 2: The rabble at Hamfest.

The newly-formed **Capes Lighthouse Radio Group** was out in force for ILLW, setting up and operating stations at Cape Leeuwin and Cape Naturaliste lighthouses in the south-west corner of VK6. The team at Cape Leeuwin was Phil VK6ADF, Anthony VK6AXB, Shaun VK6PAL and Matt VK6QS, operating under the callsign of VK6CLL. At Cape Naturaliste, Nigel VK6NI, Jane VK6FJPD and Michael VK6TU operated under the VK6CNL callsign. The stations were on air throughout the weekend and made many contacts, and many visitors to the lighthouses stopped for a closer look at amateur radio. The team is looking forward to returning for ILLW in 2016.

I believe a full report is being prepared so look out for more and some more pics next month.

Photo 3: VK6APK was the winner of the first prize.

NCRG Hamfest

Now to the **NCRG Hamfest**:

Well, the weeks leading up to Hamfest this year proved to be full of dramas and problems but as they say "It'll be alright on the day "and indeed it was.

Numbers through the doors were up for the first time in quite a few years so that was pleasing for the organising committee. Several tables were booked the day before the event causing a worry over the shortage of tables at the venue and resulting in a panic buy of folding tables by the club, well we have plenty of tables of our own now :)

The Homebrew competition was extremely well supported with, I believe, 16 entries, including eleven from the one keen constructor!

Now this is wrist slapping time for me, as I've lost the list of winners and their projects, and as I'm writing this on deadline day, I will have to chase that up and let you have the full results next month, sorry :(

I put it somewhere safe :(

On the subject of winners, the raffle was well supported and we are grateful to the following contributors for their sponsorship and prizes, Timberden Plant hire for the first prize, an FT-817ND won by Alek VK6APK, ICE Communications for a Baofeng handheld won by Richard VK6BEC, Altronics for many, many prizes including a specialist tool set won by Mel VK6TVA, also from Altronics, a solder station won by Adrian VK6NK, and two Electronics Labs, one with 30 experiments won by VK6FMAV and one with 10 projects won by VK6AAH, both of which have not been claimed as I write this, even though I have left messages and emails, so get in touch guys! Future Systems aka Steve VK6SJ donated a Comet VHF base station antenna which was won by Richard VK6HRC, Tet Emtron donated a balun kit and strain relieving kit which was won by Wayne VK6HWA.

A $50 Altronics voucher was the first prize in the Homebrew contest and that was donated by the NCRG, the other homebrew prizes being donated by Altronics. We also handed out Icom show bags to some lucky punters.

We would like to really thank all the sponsors for their generosity and hope we can get them back on board next year!

For the first time in years the food ran out with half an hour to go, this will be noted for next year, maybe the increased numbers had something to do with that?

All our local clubs and groups were represented and seemed to be doing a roaring trade with used equipment and memberships, the hobby is alive!

Measurement Innovation (Tony VK6CV and Andrew VK6IA) set up an excellent display of test and measurement equipment and had a very good day I was told, thanks guys and thanks to Tony for helping judge the Homebrew comp.

The NCRG set up a store this year selling new equipment, primarily antennas, and antenna accessories which was well received and did a roaring trade, watch out for more deals from the club at our Car boot sale in November! We also assisted in the sales of some deceased estates and I'm pleased to report almost all of it was sold.

There really was something for everyone this year and all our attendees seemed to have had a good day. Yours truly, as compere, missed out on all the deals and bargains once again :(

One of these days I'm coming as a visitor and maybe I will have the chance to buy something before all the bargains go!

Photo 4: Wally VK6YS made it!

In closing two things need mentioning, one is the tireless work put in by the organising committee and all club members who helped on the day, and in the lead up to the event, without those people it just would not happen. The second is the date for next year.

We announced on the day that it would be the second Sunday in August once again. Well, it was pointed out a few days later that the second Sunday in August next year would be RD contest. So as it stands at present we have two options, one is to move back to the first Sunday in August and clash with the Avon Descent (the reason we moved the date this year) or clash with RD Contest.

I have provisionally booked the hall for both dates until a decision is made; watch next month's notes for an update.

Finally I'd like to thank all those who booked tables, without you there wouldn't be a Hamfest! And everyone who turned up on the day see you next year!

Other NCRG news is thin on the ground as the weather has proved a real pain in our antenna work schedule, and Hamfest has soaked up far too many hours, so hopefully we can get back on track with the major projects over the next few months.

Thank you all for your contributions this month and I look forward to receiving your news next time

73 de Keith VK6RK

Participate

Spring VHF/UHF Field Day November | 14 - 15 November

VK7news

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

We firstly thank John Bates VK7RT for many, many years of service as the VK7 QSL manager. John has done a fantastic job as the VK7 QSL and Awards Manager and we thank him and bid him best wishes for the future. We welcome Herman Vesterhof VK7HW as the new VK7 QSL and Awards Manager. John and Herman have been working through a seamless transition over the last few months.

Herman has let us know that the VK7 QSL contact address has changed to *vk7bureau@wia.org.au* Herman also asks any WIA members who use the QSL bureau to contact him on the above email address so he can build up a database of QSL Bureau users.

VK7 Repeater News

The lease for the Mt Arthur site has been signed and sealed with legal costs being less than anticipated. Due to an Air Service Australia administrative error, we were able to see what would have been a fourfold increase in lease cost to $7000 if we had stayed on Mt Barrow!

Joe VK7JG, Allen VK7AN and Peter VK7PD braved the snow and ice and went up to Mt Barrow to retrieve the 2 m diplexer, digipeater and power supply and swap the 2 m repeater over the to the digipeater antenna. This means all equipment required for the Mt Arthur replacement repeater has been removed from Mt Barrow and any remaining equipment and antennas can be removed once the weather warms up and the lease finally runs out in November.

Photo 1: L to R: Joe VK7JG and Peter VK7PD carrying the 2 m diplexer down from Mt Barrow in trying conditions! Photo courtesy of Allen VK7AN.

Cradle Coast Amateur Radio Club

Congratulations to James Harris who recently passed his Foundation licence assessment. This assessment brought together the combined resources of Tony Bedelph VK7AX from the North West Tasmanian Amateur TV Group and David Cleland VK7DC from CCARC. James is hoping for VK7FJIH. Please welcome James when you hear him on air.

Northern Tasmanian Amateur Radio Club

NTARC has had a busy August with a BBQ meeting on 8 August with Peter Dowde VK7PD giving a presentation on Summits on the Air (SOTA). Peter has been instrumental in promoting SOTA in the North and North West of VK7 and his presentation was very well illustrated including his activation of summits on Flinders Island and was well received by the many members who attended.

The weekend of 22-23 August saw NTARC provide safety communication for a Northern Equine Endurance ride at Sassafras. These rides are very well supported by not only radio checkpoint communications but automated RFID tracking that each rider carries and this is automatically relayed back to the base to show progress (or not!). The group also provides a strapper alert service through low power FM radio to alert

the strappers when their horse is nearing base camp. A big thank you goes to Norm VK7KTN, Wayne, Meg, Ken VK7KKV, Idris VK7ZIR, Andre VK7ZAB, Bill VK7MX, Yvonne VK7FYMX, Ross VK7RC, Stuart VK7FEAT and Bernie VK7NK.

Photo 2: L to R: Andre VK7ZAB, Idris VK7ZIR, Norm VK7KTN and Yvonne VK7FYMX at base camp. Photo courtesy of Ross VK7RC.

Radio and Electronics Association of Southern Tasmania

Congratulations to Sean, soon to be VK7FAZE, and Stuart, soon to be VK7FEET, who both recently passed their Foundation licence assessments. Congratulations also go to Trent VK7FTRS who successfully upgraded to his Standard licence. We look forward to hearing these new callsigns on air. We welcome Lance Conry VK7LDC who has taken over as REAST Secretary/Public Officer following the resignation of Paul Hanson VK7PAH.

Reuben VK7FREU and the author were invited to present the SOTA program to the Huonville Scout Group. Reuben studied with this group of Scouts and received his Foundation licence at the same time. SOTA, the Foundation licence and Scouting are all activities that are perfectly matched and Reuben's PowerPoint presentation made this point along with some great pictures and show and tell. I'm not sure too many people realise outside of the Huon Valley, but the Huonville Scouts boast a large number of young Foundation licence holders who have their own station setup and are eager to participate in Scouting, SOTA and radio activities. This is in no small part to the involvement of Michael VK7MRS, Nicole VK7FNJS and Dale VK7FNED who are all Scout leaders at Huonville.

Photo 3: Reuben VK7FREU presenting SOTA to the Huonville Scouts. Photo courtesy of Justin VK7TW.

REAST's August presentation was on FreeDV and started with the video the author took at GippsTech 2015 of David Rowe VK5DGR's talk and then moved into a demonstration of the mode between Phil VK7JJ in Launceston and the author with a portable 20 W station on 80 m and the application was projected on the big screen to show everyone the mode. Both the 1600 and 700 bps modes were demonstrated. The video is available on VK7TW's YouTube channel.

The DATV Experimenters nights have been interesting with Rex VK7MO taking us through a great presentation on sun and moon noise and the measurements of these. There have been Pico balloon updates, miniaturisation, lenses, baluns, and much more. Our videos included Rex's GippsTech talk on his 10 GHz World Record, Tasmanian UAV videos, Ham College and we also participated in the fifth annual ATV QSO party.

VK5news Adelaide Hills Amateur Radio Society

Christine Taylor VK5CTY

Visitor from England

The August meeting was one of historical interest. The speaker was Bob G4LIJ on a visit from England. For 45 years he was an engineer for the British Foreign Office Radio Section. He had been posted all over the world at different times, including several years in Darwin.

When he started working all messages were sent by telegrams, and all sent in Morse code. Many of our members had worked within the telecommunications industry in Australia over the years and many of them had been telegraph operators, sending and receiving messages by Morse, so they could relate to Bob's experiences. Later RTTY was used; this also had been used by many members either at work or through their amateur experience.

He was involved as a maintenance engineer working on the wide variety of large scale commercial radios and involved with the changes that occurred through his 45 years.

He mentioned many names familiar to the older members, such as Plessy, Picollo and Racal that would be familiar to members from the years of valve operations but Bob was also involved in the changes to digital devices in his later years.

He spoke of rotating log periodic aerials; long wire Zepp type aerials and a number of verticals which, strangely, had the Union Jack flying from the top each day.

He travelled to many places we only know from maps, as well as some we may have visited. He was stationed in Bahrain, Budapest and Berlin, as well as Darwin and he mentioned places like Lesotho, New York and Trincomalee; in fact all over the world wherever Britain had embassies or legations.

From all telegrams messages to email and faxes and voice conferences, radio equipment was involved and Bob was involved to install and maintain it. His work had given him the opportunity to travel the world and an interesting story to tell us.

He topped the talk off with some photos of the equipment installed in Darwin during his time there. We saw massive cabinets and rack of transmitters and receivers that have all disappeared in favour of much smaller units today, however the pictures brought back memories to many members.

At the Shack

Regular Saturday morning lectures and coffee morning continue at the Shack at Blackwood. One of the most recent talks and demonstrations was by Phil Storr VK5SRP showing us how to test, stage by stage the circuits in the equipment we are building or renovating. This is a skill that has fallen into disuse over the years but which is still valuable.

JOTA

Many members will be involved with the Scouts for JOTA, on the third weekend in October when, hopefully some of the young participants will become interested in amateur radio as a hobby.

ANZAC Commemorations

A reminder that the ANZAC calls are still in use and the current update in commemoration information is available on our website courtesy of Paul VK5PAS. Please copy the URL below into your browser for this information:

http://www.ahars.com.au/category/anzac-comemorations/

73, Christine VK5CTY

VK3news Amateur Radio Victoria

Jim Linton VK3PC
● *arv@amateurradio.com.au*
w *www.amateurradio.com.au*

SK Bill Trigg VK3JTW

The passing of Bill Trigg VK3JTW (SK) makes those who knew him very sad, but most will not immediately recall the name or the immense contributions made by this Honorary Life Member, and the signature hat he wore.

William George Trigg of Balmoral in Victoria's west had his funeral on August 5. He had served on the WIA Victoria Council and was a major volunteer in the relocation from Brunswick Street Fitzroy to Ashburton.

His support in the mid-1980s, a period of enormous change, is a legacy left for us all. Among his duties was being that of the VK3BWI Broadcast Officer. Each week he put the 30 minute broadcast together initially in his Surrey Hills home, travelling to Lyndhurst to get it on air.

He then had to move to Portarlington on the Bellarine Peninsula, and showing deep dedication to the job, cheerfully added the much longer distance to his weekly Lyndhurst visit. His ultimate move to Balmoral made continuing impossible, but he always kept in touch. Sincere sympathies are offered to his family, friends and all who knew him.

Portable in National Parks

Next month is the fifth annual Keith Roget Memorial National Parks Award (KRMNPA) activity weekend. It is shaping up to see many venturing out to National Parks and those hunting them.

A list of activations is on the Amateur Radio Victoria website Award section. All inquiries about the event to Tony VK3VTH by email *vk3vth@amateurradio.com.au*

Among those in National Parks will be husband and wife duo Julie VK3FOWL and Joe VK3YSP, who recently received the KRMNPA Grand Slam Plaque in their name, having all 45 National Parks. The pair were at the inaugural Grand Slam presentations made to Peter VK3PF and Peter VK3ZPF, at the Portable Operation Master Class in July last year. The Grand Slam plaque is not an impossible target, but as Joe says: "It just takes a little time and you need a lot of help along the way."

For the first time the weekend involves a free participation certificate. To qualify, operate within a VK3 National Park and make five contacts. A list of activations is now on the Amateur Radio Victoria website Award section. All inquiries to Tony VK3VTH by email to *vk3vth@amateurradio.com.au* The activity period is November 13-16.

World DATV QSO Party gets plenty of views

The 5th World Digital Amateur Television QSO Party had participation in Australasia, Europe, Asia and North and South America.

Held on August 21-22, sponsored by Amateur Radio Victoria and the Melbourne ATV Group, it was streamed on high definition YouTube by Ralph VK3LL.

A total of 655 viewers included those in Antigua, Argentina, Austria, Australia, Belgium, Canada, Switzerland, Chile, China, France, Great Britain, Ireland, South Korea, New Zealand, Peru, Sweden, Slovenia, Turkey, and the United States.

The whole 25 hours also had the British Amateur TV Club streamer, with viewer numbers there unknown. It was also relayed on VK3RBO repeater at Bendigo in Central Victoria.

Organiser Peter VK3BFG said the program primarily showed what ATVers do with their visual mode. Friday night saw the Melbourne ATV Group via VK3RTV, then the ATV repeaters VK2RTS at Lawson in the Blue Mountains of New South Wales, VK2RTV Gladesville Sydney, and the VK4RMG Brisbane.

A short video was played from Winston VK7EM showing a trek to a disused mine in Northern Tasmania. Contacts were made to VK5 and VK7 as well. In all cases, net controller Peter VK3BFG sent the Skype by 23 cm DATV to VK3RTV. The Australian hook-up included stations from VK2, VK3, VK4, VK5 and VK7.

Saturday saw telecasts from users of the Central Ohio (ATCO) WR8ATV repeater, followed by W6ATN in Southern California. A feature was a tour of the commercial TV Station on Mount Wilson conducted by Roy W6SVT.

On Saturday night there were contacts in the UK via GB3HV the Home Counties ATV Group Repeater near Farnham in Surrey, which has direct Skype access.

The event took a lot of organising. Special thanks go to Australians Peter VK4EA controlling Brisbane, Gary VK2CRJ in Sydney and David VK5DMC for his efforts to get the Port Pirie repeater VK5RMC up and running.

As usual, Art WA8RMC in Columbus Ohio and Don KE6BXT in Mission Vieja in Southern California were the international net controllers.

Peter VK3BFG says there were some 700 involved as telecasters or viewers, showing growth on previous years. The invitation is for any ATVers in the world to join in 2016.

Prospective radio amateur class

Do you know someone who could do with a little encouragement to become a radio amateur? Enrolments close soon for the Foundation licence instruction classes and assessments on October 10-11.

These are held at the Amateur Radio Victoria office 40g Victory Boulevard, Ashburton. The necessary study and operational practice guide book can be obtained as a mail order for $26 from the Amateur Radio on-line shop.

To enrol contact Barry Robinson VK3PV *foundation@amateurradio.com.au* or 0428 516 001.

VK2 news

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

October will be a generally quiet month at **ARNSW**.

November will however have several events with a Field Day scheduled for Sunday the 8th. Details will be in VK2WI News.

Bookings by an email to: *fieldday@arnsw.org.au*

The Monday evening upgrade class concludes on the 16th.

The final Foundation weekend and assessments for the year are on the 21st and 22nd.

The last Trash & Treasure is on Sunday the 29th. Then we all get ready for the end of year activities and before we know it, it's all on again in 2016. A New Ham Field Day planned for the end of August has been deferred to a new date yet to be advised.

WICEN NSW held their AGM in late August with the following positions:

President Steven Heimann VK2BOS
Vice President John Harper VK2LJ
Secretary Steve Diekman VK2MCA
Treasurer Doug Rosser VK2DCR

Committee members:
Jan van Ekris VK2FEB
Al Hirschel VK2KAM
Irene van Ekris and
Eric van de Weyer VK2VE.

This month there will be two major operations. The first is the annual Barrington Tops SAREX looking for the missing light aircraft VH-MDX over the weekend 17/18th October. The following weekend - 24/25th - is the annual Hawkesbury Canoe Classic. On October 31 there will be an exercise at Jenolan Caves.

Northern Rivers WICEN has the Horse Enduro at Wiangaree on the 3rd and 4th October.

A reminder that a couple of the clubs have activities before the year is finished with **Manly Warringah RS** having a project for you to construct a "Build from e-waste", so get your thinking caps on how to turn some electronic trash into treasure. **HADARC** wants you to construct a QRP rig not exceeding 5 watts, the lower the better. HADARC has formed an ARDF group under the leadership of Clifford VK3CLF. Their web site *www.hadarc.org.au*

This month is JOTA and JOTI. A reminder in VK2 - at least - anyone taking part has to have a *Working With Children* approval.

Summerland ARC has an Advanced course planned for the week Monday the 2nd to Friday the 6th November. Apply to *education@sarc.org.au*

It's still a while off but put a note on your fridge that the 2016 **Central Coast** Field Day at the Wyong Racecourse is on Sunday 28 February.

73, Tim VK2ZTM.

Maritime Mobile in the Whitsundays

Stephen Warrillow VK3SN

Amateur radio has surely got to be one of the most flexible and practical hobbies around. In the past, I've incorporated radio into back country ski trips, multi-day bushwalks, 4WD tours, bicycle touring and any number of holidays around Australia and abroad.

During these adventures, radio has provided a very useful communications link with the outside world as well as being a lot of fun. One activity I'd never tried was maritime mobile (MM) work. On rare occasions, I have thoroughly enjoyed making brief contacts with stations out at sea and always wondered whether MM might be an achievable option for someone with no boating experience and only basic radio gear. After a week in the Whitsundays of VK4, I now know that it definitely is!

Photo 1: The station set up on a seat: KX3 and battery connected to the antenna system.

Photo 2: A panoramic view from the yacht.

Photo 3: A view from Border Island.

Photo 4: The solar panel on the front of the cabin.

As an island continent, Australia has one of the longest and most varied coastlines in the world. The Whitsunday Islands of Queensland are renowned as a sailor's paradise. Approximately 900 km north of Brisbane, the collection of 74 or so continental islands lie within the Great Barrier Reef and are thus fairly protected from extremes of weather. After hearing wonderful stories from work colleagues who had visited the islands and sailed around them, the idea had begun to take hold. All I needed to do was convince my family that we should try a sailing adventure in the tropical north...

There were a few issues, the main one being that we had no maritime experience whatsoever. After a bit of research, it became clear that this was not necessarily a deal-breaker. The yacht charter companies certainly preferred experienced clients, but did not insist. A few phone calls later and more online study made it clear that with a bit of effort, it would not be too difficult to acquire the basic knowledge required. While a marine licence is not mandated for individuals chartering a yacht, it seemed sensible to obtain one, so booked in for the necessary classes

Photo 5: The author operating from the Captain's Chair.

nd sat the exam. In theory at least, now knew the fundamentals of aritime safety, navigation and he road-rules of the sea'. After a rther half-day spent on Port Phillip ay with a commercial training rganisation learning how to avoid etting into trouble and manoeuvre small vessel, I felt a little more onfident. None-the-less, I had a w nagging doubts; how would we anage a much bigger boat for a eek in open water?

As complete novices, trying to anage sails for a week would have een a rather bad idea. There would e more than enough to contend ith without having to also manage ails and wind, so we chartered a otor catamaran. At just over 10 m length, this vessel would prove erfect for our family of four. With ree cabins, shower/WC, saloon nd galley, it had all the essentials r a week at sea. There were also everal decks for spreading out little. After one final discussion, e committed to the charter and aid to rent the boat for a week. he provisioning service was also xtremely helpful; we simply did our od shopping online and had all ems delivered to the boat for when e arrived.

After a full lunch on Christmas ay, it was then time to pack for the ip. In addition to a few clothes, iletries and other essentials, I ad to figure out what radio gear take away. We were due to fly to Hamilton Island on Boxing ay and I'd left my run a little late get organised. Fortunately, the ear I use on hiking and ski trips as ready to go. The Elecraft KX3 a beautiful piece of QRP kit and orks nicely with a 20 W roll-up olar panel and lithium ion batteries have. However, the full sized 80 m ook-up wire dipole I usually take way was not going to work well on 10 m long boat..... A quick bit of nline research led me to discover a reat site authored by VK7JJ, which escribes a multiband squid pole ertical antenna. See *http://www.erite.com/vk7jj/squidpoles.html*

Photo 6: The loaded vertical antenna wound on a squid pole mast.

Fortunately, I already had a 9 m squid pole (I'd previously used it to hold up the centre point of portable inverted-V dipoles), some hook-up wire, banana plugs and PVC conduit handy plus a few hours for construction. Following Phil's excellent instructions and photos, I soon had an ultra-portable light weight vertical which would allow me to operate from 80 m through to 10 m using a couple of matching coils and the KX3's inbuilt tuner. There was not time to test it though and I packed the lot into my bag, hoping it would all work correctly when deployed at sea.

After a nice flight from Melbourne, we landed on Hamilton Island and made our way to the marina. The catamaran was ready, fully fuelled and provisioned. After a one-hour orientation to the vessel from the charter company tutor, there was time for a quick lesson on how to manoeuvre and anchor as well as manage the dinghy. The charter bloke then announced that he was satisfied with our capabilities and departed, wishing us well for the seven nights and reminding us of the mandatory VHF marine radio schedule due the next morning. With a little trepidation, we cruised away from the Hamilton Island marina, checking the charts and GPS navigation screen

anxiously as we steered a course for our first night's anchorage.

Within a few hours, it was clear that this would be one of the best family adventures ever. The experience of complete freedom was exhilarating as we navigated 'our' boat through one of the most beautiful island archipelagos in the world. With a little planning, careful study of the charts and attention to the depth sounder and GPS, we managed to steer through narrow channels and find our first night anchorage in Cid Harbour. After a little messing about, we managed to get the anchor bedded down and took in our surrounds. Having concentrated on getting safely into this point, it was now time to relax and enjoy the serene beauty of the stunning vista before us. Bathed in the late afternoon sunshine, we were in a large natural harbour, surrounded by steep slopes which were covered in pristine rainforest. This was what we'd come to experience! With dinner cooking and a cold drink in hand, this really was paradise.

The next morning, we took the dinghy up to a small sandy beach and went for a short bushwalk across to an adjacent inlet. The wildlife was prolific and we constantly encountered large monitors, abundant birdlife and small wallabies. After a swim and packed lunch, we headed back to the boat and decided to push on with more exploration. Later that evening, we anchored at Nara Inlet and I set up the squid pole and counterpoise. With some trepidation I connected the KX3 and checked if it would tune to a decent SWR. With relief, I found I could easily get a good match on all bands using the appropriately adjusted coils. I put out a maritime mobile call on 40 m and was immediately rewarded. Within an hour, I'd worked quite a few stations on 40, 20 and 15 m and it was clear that my solar powered KX3 and the squid pole worked just fine. Time to celebrate with a cold drink!

Photo 7: VK3FCEW enjoying the view, with VK3SN at the helm.

Over the next week, we settled into a relaxing rhythm. Each evening we'd check the weather and tide forecast prior to scrutinizing the marine charts. A plan for the next day would form and we would outline our intentions during the marine-VHF radio schedule with the charter base next morning. The charter team was extremely helpful and provided excellent support and advice on planning each day's adventures. Over the course of a week, we made a large clock-wise circuit of the Whitsunday group heading as far north as Hayman Island, as far east as Border Island and as far south as Lindeman Island. The boat had everything we could possibly need and felt very comfortable. Most days included swimming, snorkelling on stunning coral reefs, an optional bushwalk to an island peak, exploring mangroves in the dinghy, lazing with a good book on the deck and a bit of fun on HF. My favourite contact was on 20 m with VA7MLW who was MM on a solo round the world trip and kept in touch with various amateurs around the globe. On the afternoon I caught up with him, Glenn was near New Zealand and chatting with a few contacts in NZ and the UK. It really is amazing that a few watts of RF can link operators around the world and we had a brilliant chat about the experience of MM with several amateurs acros various continents.

After a fantastic week out from civilisation, our charter had run its course. We cruised back to the Hamilton Island marina to return th boat. It was good to be back on dr land, although the weird experienc of being on an unmoving solid surface did take a little getting use to after seven days of being on the water nearly the whole time. After a long hot shower (we'd been limited to two minute showers on the boat we enjoyed dinner and looked at photos and charts of our week-long adventure. Looking at the radio log, I was also very satisfied; with only minimal preparation, the antenna had worked extremely well and I'd managed to put out up to 10 W running on solar power and batteries the whole time. The opportunity to visit pristine beache explore coral reefs, anchor at remote islands and do it all at our own pace had been brilliant. Flying home to Melbourne the next day, we had a wonderful view of the whole archipelago and knew for sure that we'd love to come back and do it again – maritime mobile i definitely worth the effort!

ALARA

Christine Taylor VK5CTY – Publicity Officer

The new ALARA Constitution

Very shortly all VK members of ALARA will be sent the final copy of the new Constitution. ALARA is incorporated in Victoria (because this is where it was founded). The Act that governs incorporation has recently changed the Rules so that every organisation operating under those Rules has had to change its constitutions. Members have to vote to accept or reject the new Rules.

You must cast your vote or nominate a proxy.

This is required by law, so please read the new constitution and cast your vote. You certainly may nominate a member of the committee to act as proxy for you but we MUST have at least 70% of our members involved.

ALARA Award

Have you applied for your ALARA Award?

I hope you all enjoyed the ALARA Contest at the end of August, and I hope you have applied for the very attractive ALARA Award. Both YLs and OMs can apply for this award and display it on their Brag Board.

Interesting visitors to VK5

Marlene ZL1MYL and her OM Laurie ZL1ICU made a flying visit to Adelaide just in time to have a meal with seven YLs with their partners and to be able to attend the AHARS monthly meeting. Marlene ZL1MYL and her OM Laurie are members of the TOS (Theatre Organ Society) in New Zealand and came to Adelaide to participate in the 50th year celebrations for the Capri Theatre Wurlitzer Organ.

Marlene and Laurie are working to be able to save a theatre, and its organ, in Auckland that is threatened with demolition. Several years ago the Capri Theatre was in much the same position due to the costs of renovations. They were interested to hear how the Capri Theatre survived.

If you have not been to the Capri Theatre to see the Wurlitzer in action, it is highly recommended. As well as the lovely sound of the theatre organ there are curtains on either side of the stage that open to reveal hundreds of instruments playing the notes you are hearing. Puppets play drums, or blow trumpets and you see hammers striking the xylophone keys. Not all theatre organs have this feature, so the Capri is fairly special. But even more special is that the mechanism and machinery of this organ escaped from Darwin a very short time before the cyclone struck: very fortuitous indeed!

As it happens, Tina VK5TMC, Jenny VK5FJAY and I (who missed that meeting due to a meeting of JPs) had met Marlene and Laurie when we went to the 50th birthday of WARO in Rotorua, so it was a pleasant reunion for us.

ALARA Luncheons

VK3 has sent out notices for their next luncheon, while VK5 is hoping soon to have a new, regular venue. Notices will be sent out shortly, about this, too.

Please send contributions and photos for the next column by 27th September 2015.

33,

Christine VK5CTY

Thank you all the WIA volunteers

An enormous amount of voluntary work is carried out by the Wireless Institute of Australia on behalf of its members, and for amateur radio generally.

The United Nations International Volunteer Day is on Saturday December 5, providing an awareness of volunteerism and our community.

Being a volunteer enables many organisations to function, and provide service, including the Wireless Institute of Australia.

The WIA board of directors, the Publications Committee, the VK1WIA weekly broadcast and regular contributions come from many of the other structured WIA committees.

It all seamlessly forms the work of the WIA. Often the membership sees the benefits, but don't know what exactly is the behind-the-scenes work involved to make it all happen.

Please give a thought, and praise, to the many WIA volunteers who give up time to carry out their roles.

All WIA Directors have had their summary description revised and put on the WIA website. To learn more about them, and the WIA, go to the website at *www.wia.org.au*

VK3news Geelong Amateur Radio Club

Tony Collis VK3JGC

The GARC AGM

In accordance with procedures, Secretary Vanessa VK3FUNY read the minutes from the last AGM before handing the floor to President Lou VK3ALB.

The outgoing President Lou VK3ALB, in his end of year report, then reflected on what had been accomplished in the preceding year, thanking his executive for the support they had provided him with during that period. In response it was agreed by all present that Lou had provided the club with both excellent leadership and competence in the management and the driving of the Club in the previous year.

President Lou then declared all GARC posts vacant and handed over the chair to Nik VK3BA to announce the nominations for the new 2015 GARC Executive.

The following were then elected to the GARC Executive and Committee:

The 2015 GARC Executive Committee
President: Lou VK3ALB,
Vice President: Tony VK3JGC,
Secretary and Public Officer: Vanessa VK3FUNY,
Treasurer: Russell VK3KRS,

The GARC 2015 Committee members:
Calvin VK3ZPK, Nik VK3BA, Barry VK3SY, Chris VK3ACG and Courtney VK3FGIR.

At the completion of the election process President Lou VK3ALB then presented the **Ray Cowling Award** to Barry VK3SY, for the individual that club members voted *"has contributed the most to*

Photo 1: Lou VK3ALB presenting Barry VK3SY with the 2015 Ray Cowling Award

Photo 2: The VK3ALB Caravan at Point Lonsdale.

hoto 3: GARC members operating at ne ILLW.

mateur radio and the GARC in the receding year".

The ILL Weekend

he GARC had a significant resence at the Point Lonsdale ighthouse for the ILL Weekend.

The following **26 GARC Club nembers** participated in the ILL Veekend at Point Lonsdale:

Craig VK3VCB, Ken VK3NW, eorge VK3AGL, Lee VK3PK, ou VK3ALB, Jenni VK3FJEN, ob VK3BYS, Nik VK3BA, Chris K3ACG, Courtney VK3FGIR, anessa VK3FUNY, Garry K3FWGR, Michael VK3AMI, Emma Ceperkovic, Graham VK3FAIC, Ian VK3BFR, Ian VK3ZIB, Peter VK3WK, Alan Jalocha, Cal VK3ZPK, Barry VK3SY, Bert VK3TU, David VK3QM and Chas VK3PY.

In addition to the above Dallas VK3DJ operated out of the Marconi Hut at the Queenscliff Maritime Museum.

During the course of the ILL Weekend the GARC contacted over 100 stations on 20 m and 40 m bands covering VK1 through to VK7 with a small number of European stations included.

As this event has created considerable interest for the club members, Dallas VK3DJ has registered the GARC for the 2016 ILLW at Point Lonsdale Lighthouse and himself for the Queenscliff Black Lighthouse for 2016.

Photo 4: The GARC Wednesday Group Antenna Production Line

The Wednesday Group Antenna Project

This project, promoted by Bruce VK3HAV, was the building of 14 more VK2ZOI "Flower Pot" antennas for the 2 m and 70 cm bands.

This follows on from a previous exercise at the club house covered in the March 2014 issue of the *AR* Magazine when a group exercise, involving 18 members, on a Sunday afternoon at the club house were building the 2 m / 70 cm portable antenna; on that occasion the activity was promoted by Lou VK3ALB, who provided construction information, derived from the VK2ZOI website at *http://vk2zoi.com/flower-pots*, as well as the base materials along with templates for the construction.

Once again the necessary materials, tools and equipment were provided and a lanVK3ZIB's radio and SWR meter was available for testing the end products.

Extract from the WIA 2014 Oceania Plaque and Trophy Winners

or the third successive year the Geelong Amateur Radio Club has won the)ceana Australia Club Plaque.

AUSTRALIA Club Plaque	Local club from Australia with the greatest number of entries from its members	VK Contest Club	**Geelong Amateur Radio Club**

he Oceania Club contest requirement is at least two clubs in Australia must articipate, and that each club operator must submit at least **50 valid entries** their logs.

The **GARC** won this plaque in the **2012** and **2013** Oceania Club contests.

In 2014 27 **club members** participated in the 2014 Oceania Club contest.

The following statistics relate:

Overall Club Performance	Band activity for the Club
2134 contacts made across five bands	40 m – 1135 contacts & 66 call prefixes
Aggregate score - 441,763 points	20 m – 529 contacts & 171 call prefixes
285 unique call prefixes worked	15 m – 243 contacts & 113 call prefixes
399 unique call signs outside VK	10 m – 123 contacts & 35 call prefixes
Six Foundation operators on the air	80 m – 94 contacts & 7 call prefixes
	160 m – 10 contacts & 3 call prefixes

etails of who made it to the scoring can be found at:
ttp://www.oceaniadxcontest.com/ocdxc14-results-ph-scores.pdf

Of particular note from the results is that Peter VK3WK made 1st place in ne 40 m Phone category.

VK4news BARC

Les Neilson VK4FAEB

The new club project of the Radio Training Operations Facility (RTOF) is well under way with the installation of the demountable and members have made internal renovations and exterior painting has begun. Hopes are to have the RTOF operational for the annual JOTA event in October. Our club station VK4BA will be on air with the Rochedale Scouts during this event.

At the present time, our UHF repeater VK4RBA on 439.950 is located at the same location as our RTOF and although the location is high we are surrounded by trees and the antenna is below the tree line. As a consequence the repeater does not perform at its best. Moves are now afoot to relocate the repeater to Mt Coot-tha which will give the repeater a commanding view of most of the Brisbane area.

Several members are qualified Learning Facilitators and Assessors for the Foundation licence and we are now preparing for our next round of Foundation licence applicants. Those of you in the greater Brisbane area who would like to obtain your F-call, please contact us asap. For further information our President can be reached on 07 3341 8236.

Photo 1: Jim VK4FKGF (hand raised) giving instructions to members on the installation of the mains power cabling.

Photo 2: Working Bee team applying paint.

Gold Coast Amateur Radio Society communication support of the Peaks Challenge Bike Ride

On Saturday 8 August, the Peaks Challenge Bike Ride was held in the Gold Coast Hinterland. The event involved around 1000 riders completing a 235 km course with a total of over 4000 m of vertical climbs as the course covered Mount Tamborine (via Henri Robert Drive), Beechmont, Springbrook, Natural Bridge, and Tomewin. The Brisbane Area WICEN Group has a long history supporting Bicycle Queensland, and as the event was run by the Bicycle Network in conjunction with Bicycle Queensland, WICEN was called upon to provide assistance with event communications and marshalling.

Photo 3: Norm VK4ANB and Les VK4FAEB putting the second coat of white over the original blue.

The Gold Coast Amateur Radio Society's Springbrook 2 m repeater on 146.700 MHz was ideally located to provide communications to much of the event route. One of our members, Ed VK4JEN, who is also a member of the Brisbane Area WICEN Group, approached us requesting the use of VK4RGC, along with any Club members who would be interested in manning the many checkpoints along the course

he Club was happy to help, and a umber of members were keen to et out, play some radio and soak p the beautiful Gold Coast winter veather.

It was an early (and cold!) start or Aidan VK4APM and Peter VK4PI ho headed up to Eagle Heights nd the Tamborine Showgrounds o count the riders after the first, nd most strenuous, climb up enri Robert Drive. Next on the oute were Mark VK4DMH at eechmont State School, followed y Kev VK4IW & Roger VK2LRB at reeman's Farm, and finally Ben K4UT at Tallebudgera. Brisbane rea WICEN Group members also anned a number of rest stops and ey points along the route and ran et control, located at the Royal ines Resort.

This is the first year the Peaks hallenge had been run on the Gold oast, and by all accounts, it was a uge success. The club is looking rward to supporting Brisbane Area /ICEN and the event in the future.

/eb site for Event *ttps://www.icyclenetwork.com.au/peaks-hallenge-gold-coast/the-route/*

Photo 4: Peaks Gold Coast Route Map.

015 HAMFEST

ur annual Hamfest will be held on 4 November 2015 at the Albert /aterways Community Hall (the sual location). Renovation of ie Pacific Fair Shopping Centre, cated next to the hall, is nearing ompletion, meaning parking won't e an issue and providing a perfect istraction for the XYL. It's shaping p to be another great Hamfest ith new and used equipment, hot od and cold drinks, raffle prizes nd a great opportunity to catch p with friends new and old. Tables e available and more information available by emailing our Hamfest ordinator at *hamfest@gcars.com.au*

ayside District Amateur adio Club

/e conducted a survey with ur members earlier this year to etermine the content of this year's activities for the club to focus on and have since developed a schedule of activities on the most requested. These are some of our recent activities:

Foundation Upgrade Course

This course has proved popular as 17 Bayside participants have now completed the Regulations study on 5 August with four course leaders, they are now commencing the Theory part of the course, with plans to book them in for the Regulations examinations in the near future.

Kit Building

One of the more popular requests was for an Arduino Kit building workshop which was led by Buddhika VK4FTAA and ably assisted by Bob VK4YA. Two nights have been planned with 13, but grew to16 participants completing out the first night and a second night on 31 August will see this successful workshop completed.

The Cleveland Point Lighthouse weekend

The Lighthouse weekend held on the 15-16 August was a roaring success together with an excellent venue at the Cleveland Point Lighthouse, together with the intention to continue operating throughout the wee hours of the mornings to improve access to all the international stations. We were happy with an outcome with a total of 52 contacts achieved by our members including RD and others. We were also pleased to welcome one new member and two visitors this month.

George Nicholls
Secretary
Bayside District Amateur Radio Society Inc.
http://www.bdars.org.au/

73, Les Neilson VK4FAEB

CW Today

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

What is it that makes CW still relevant today? Why do most HF radios still have a CW switch? Is CW really Morse code? How can I get started in CW? Is CW difficult to learn? Is CW making a comeback or is it going to fade away in future? How can I try CW on the air? These questions and more will be answered, along with information and news of interest not only to CW operators but also hopefully for those who don't know any CW, in this new column in the *Amateur Radio* magazine.

Efficient communications mode

Most current commercial, military and government communications have moved to higher and more efficient data transfer modes known generally as digital modes. Especially with the advent of computer systems that make use of precise timing, wider bandwidth, handshaking and forward error correction among other things, CW is now the most inefficient data mode but in contrast still remains the most efficient non-computer communication mode.

There are many other reasons that CW is now making a comeback

Photo 1: The Pixie transceiver and accessories almost ready to go into action. Photo by John Eyles VK2YW.

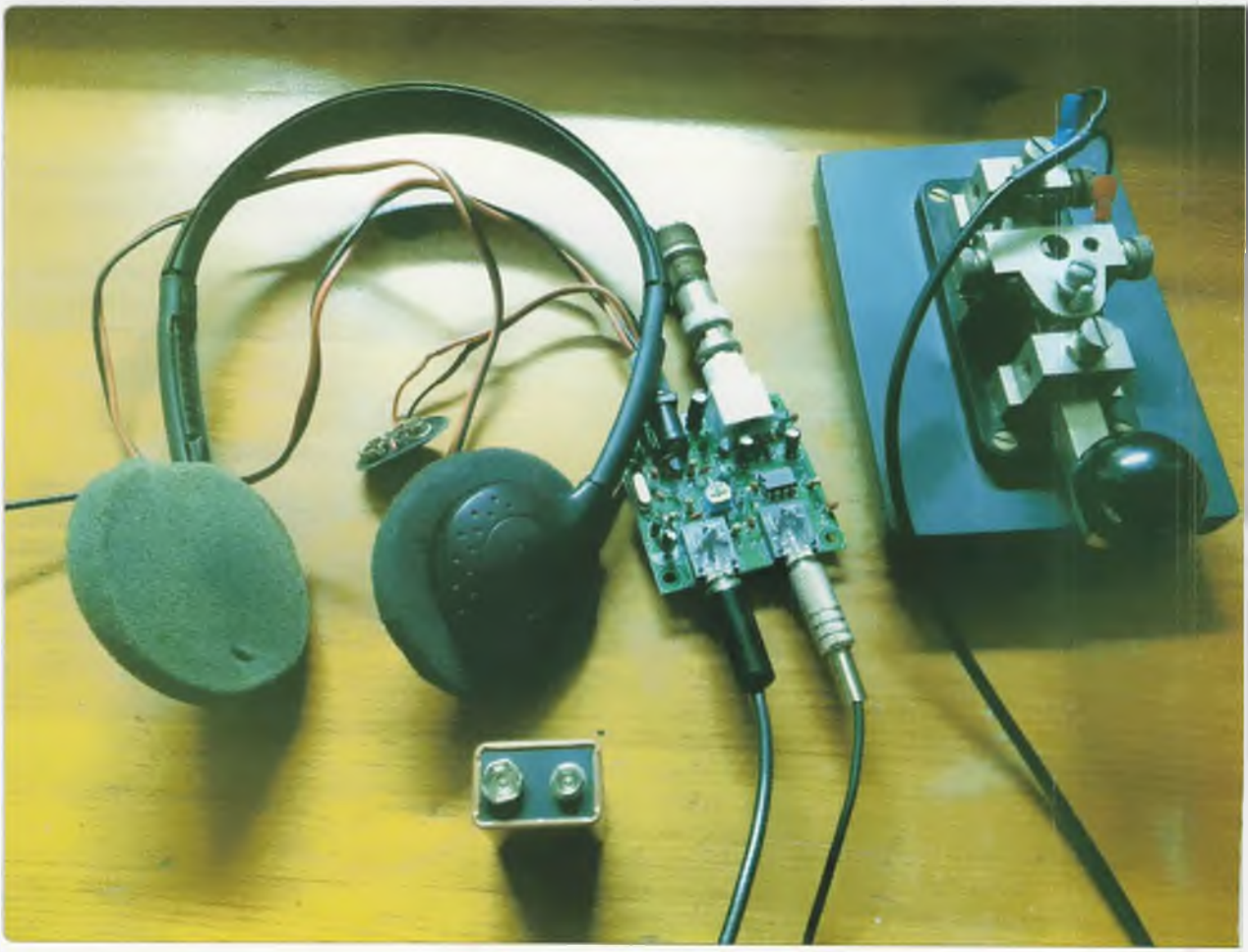

Photo 2: John VK2YW beaming with the success of the Pixie transceiver in use on a SOTA summit. Photo by John Eyles VK2YW.

among radio amateurs, and also why it remains in use even today in the most modern of aeronautical navigation and safety systems. All airline pilots are required to know CW. Tune down to MF or LF frequencies and listen to the automated announcements by airports and aeronautical navigation beacons, and note the CW identifications still being used in the latest technology.

For many radio amateurs, CW is a useful mode to be able to use because it is the least expensive mode to produce from home brew equipment, and requires very little power compared to wide band modes, concentrated in a single channel, to achieve successful DX contacts or in SOTA and portable low-power battery-powered operations. The human ear, if accompanied by a CW-trained brain, is a better decoder of CW than the best of software, especially if aided by receiver or audio filters.

Fading, static, interference and variations in sending are less of a problem to the trained CW operator who can copy in all these conditions, any combination of which will usually defeat the best of software CW decoders. One of the reasons for this is that CW has variable lengths, even when perfectly sent, so there is no way to know how many letters went missing in a burst of static, noise or in fading. Nor even which letters are being run together or sent incorrectly in defective sending.

So what are all these Q-codes? Certainly, due to the speed of CW compared to speech, unless you are a very high speed operator able to copy 60 WPM, most CW communications take place around 15-25 WPM, and the use of agreed Q-codes and other abbreviations make the use of CW much faster and more comfortable once these are memorised or kept handy, especially at slower speeds. Thus the effective speed of transmission is actually much higher.

DX and portable use

CW for DX provides a better signal-to-noise ratio with less power and thus better communication effective throughput than SSB for any given power or antenna system. The ability to use very low power when operating portable or on a battery with CW are also another benefit and the reason it is often the mode of choice for such operations. Simple home brew transmitters and

receivers can be constructed and work well with CW on as little as one Watt.

With the healthy outdoor activities of Summits on the Air, Parks activations and generally a good excuse to get out into the fresh air and nature, CW is a good mode to use with little power, simple lightweight wire antennas, and lightweight gear, all easily fitting into a back pack. See Photo 1.

Emergency communications

An experienced CW operator can send and receive emergency communications messages faster and more reliably than voice, where words often have to be spelt out phonetically letter by letter. Not so in CW, as each letter is sent as it is and is thus clear to the receiver. The IARU Emergency Communications Manual acknowledges this fact, as well as that when data communications may be down due to modems, computers, power or other problems, CW is usually still available in reserve.

In the US and some other places, CW traffic handling and emergency communications preparedness is therefore widespread.

CW transcends language barriers

CW is an international language. Foreign operators who speak little or no English or have problems with their English pronunciation, are able to memorise or keep handy these various abbreviations, translated into their own languages, so contacts can take place with ease across language barriers.

Anyone who has listened in Europe, or used the online SDR web radio at Twente University in Holland which is easy to use and requires no registration, will hear the CW exclusive portions of the amateur bands awash with activity. Very many "rubber stamp" contacts (standard format on first over: RST, QTH, name, how copy and on second over: power, antenna, weather, thanks and best wishes) take place, making it much easier for a new and inexperienced operator to venture onto the air and have successful and enjoyable contacts.

CW has proven to be a very therapeutic activity similar to the way music is often used in therapy. Those of us who have been through traumatic events, are recovering from illness, find CW a wonderful aid in recovery. Having something to concentrate your mind on, provided it is relaxing and stress free, is always a good thing. For those of us who have mastered the art of CW, our daily CW usage is almost an essential part of daily life, even if just for a few minutes a day.

CW activity in Australia

If you listen in CW on 7050 kHz, you will hear activity at random times of the day and night, with stations moving off for chat unless just calling or making a short announcement. A code of conduct was established between some 30 active CW operators thus far, to keep calls to no longer than three times call sign of called station and three times your own call sign, no more than three calls being made per five minute period so as not to hog the frequency, and moving off to another frequency (QSY) immediately upon establishing contact.

This arrangement has led to more activity and more contacts because especially during periods of low activity on the CW band such as during the week, if one calls CQ for a long time on an unused frequency further down the band and receives no reply, a short call on 7050 has often resulted in contacts because of the stations listening there, sometimes with their squelch up, while doing other things such as home brewing or tending to emails.

SOTA and low power (QRP) activities are to be heard usually between 7027-7033 kHz, and some low power crystal controlled stations operate rock-bound on 7023 kHz. On Sunday mornings, the 43 year old CW net is still going strong with sometimes over 30 check-ins and contacts resulting, between 10 am and midday Eastern Time on 7025 kHz. Stations are paired up and given a frequency for a chat. These and other CW activities will be covered in more detail in upcoming editions of this column.

VK CW information

A web-site at VKCW.net was created generally for licensed VK amateurs so that those with interne can see the various and growing list of CW activities geared around everything from learning CW, to slow speed practice, from CW nets to Emergency Communications training and traffic handling, CW broadcasts, forums and more. Not affiliated with any club and oper to all with an interest in CW, this is a good place to find current information.

For those without access to the internet, with some of the older CW operators even today proud not to be on the Internet at all, as well as for anyone looking for further practice, in the light of the CW survey published in the September edition of *Amateur Radio* magazine the popular demand for a CW broadcast –QST –has been taken up and proven successful. Main broadcast time is at 9 am Eastern around 7022.5 kHz and everyone is welcome to relay these broadcasts themselves.

Please check the terms of your licence, as for example, Foundatio licensees cannot send computer-generated digital CW (DCW), although many of us would like to see DCW allowed within the share data-CW bands, as this has been proven to be one of the things that aids some people in developing their CW skills. Staying out of the CW exclusive band with DCW would avoid problems for others.

Getting Started

Upcoming editions of CW Today will discuss the many ways of learning CW effectively and with

e maximum pleasure. Learning chniques have come a long way ith helpful tools and "Elmers", entors willing to assist newcomers get started on CW.

The tools available to learn CW w, especially software such as 4FON and LCWO.net make it sier than ever to learn CW.

Every high speed or professional W operator began from scratch, don't ever frown on the beginner! very journey starts with a single step!

igning off

you have any CW news to report, any opinions to express, please do write in to me by email and I'll be happy to incorporate whatever I can within this column. Upcoming issues will explore some of the above mentioned topics in further details.

Emergency communications, band plans, QRP activity, CW clubs, new CW activities, licence conditions, tips and tricks and more will be covered. There will be something of interest to everyone, even those who aren't CW operators.

On a personal note, a big thank you to the very many wonderful CW operators at all levels who welcomed me back into CW activity after a long pause due to events in life. The friendships that have resulted from this wonderful hobby of ours and the ham spirit in VK have been magnificent. I have only one regret: that I did not remember this hobby and get back into it sooner – life could have been very different.

Welcome to the world of CW and we hope you too will be a part of the "CW revolution" now taking place across Australia, and discover the Joy of CW :-)

73 ES 77 de Lou VK5EEE

Silent Key

Ross Boyd VK2RR

Ross passed away peacefully in the early hours of Friday morning, 31st July 2015, in the Palliative Care Unit of Wauchope Hospital after a long illness. He was aged 69 years.

Ross and his wife Sue retired to Lake Cathie on the North Coast of NSW in 2011 after he had a long and interesting career in electronics in Sydney.

In his earlier years, Ross worked for AWA where he met and married Sue over 50 years ago. One of the products that Ross was an expert on was the AWA 25M VHF FM mobile radios. Ross went on to take up a marketing role in the company.

In later years Ross was a TAFE teacher of electronics. He carried this expertise

through to his retirement and was a WIA Assessor for amateur radio licensing. He did this as part of his active involvement in the Oxley Region Amateur Radio Club.

Ross was first licensed in Sydney as VK2ZQU and was very active on 6 and 2 metres FM. In retirement he took out the two letter call VK2RR, which hinted at his lifelong interest in exotic and performance cars. He had also been a very active model aeroplane enthusiast specialising in control line models.

The amateur radio fraternity extends its deepest sympathy to Ross's wife Sue and their children Evan and Penelope and their families.

Vale: Ross Boyd VK2RR.

Submitted by Henry Lundell VK2ZHE on behalf of the Oxley Region Amateur Radio Club Inc.

SOTA & Park News

Allen Harvie VK3HRA

Park Activations

There are two weekends coming up for the activation of parks to note.

The **KRMNPA Weekend** across **13 to 16 November** 2015.

Whilst this is a VK3-based program, many VK2 and VK5 operators will cross the border to particulate.

Then we have the World Wide Flora & Fauna program **(WWFF) Activation Weekend** the following weekend being **28 and 29 November** 2015.

With the upcoming planned activities I will encourage all to get out of the shack and activate a park near you.

There are over 950 WWFF listed parks in VK. This includes the 33 ACT Nature Parks were added to WWFF in May and 3 Wilderness Parks, 13 Marine National Parks, and 25 Regional Parks that were added in August.

To find a park near you, go to parksnpeaks.org and select the 'Tools' tab. You will be presented with a page that will allow you to enter your QTH and a distance to cover. Enter these details and it page will be returned listing parks and peaks available. A link will lead you to a Google Map file to support your planning so you can verify access and the driving times involved.

So before you dust off the field day gear, cut a dipole and let's go over the operating requirements for each scheme to ensure your activation is valid and suitable to your level of participation.

Both VKFF and WWFF allow for the number of contacts over several activations to qualify. Once you have achieved the required number of park activations, you can claim an award. More details on the awards' web sites.

Mobile is where operating from and using vehicle power and antenna is acceptable.

Portable is operating independent of a vehicle. There is a sensibility test for this: Can you continue to operate if the vehicle was driven away? If the answer is Yes, you are OK.

SOTA is for portable operations at a defined point where the operator must carry in all the equipment for the activation. There must be no association with a vehicle. So you can't use the power from or operate from a vehicle. The SOTA Activation Zone (AZ) is the area within 25 vertical metres of the summit of the peak. You only require one contact to activate and four contacts to qualify the summit.

For global WWFF awards, a minimum of 44 QSOs are required and an operation time of at least two hours. Please note that for VKFF awards, a minimum of 10 QSOs are required, with an activation period of 30 minutes. Also note that this can be over multiple activations. The activation period includes an allowance for station set up.

Contacts via repeaters, IRLP, or EchoLink are not permitted. Using these techniques to alert others to your activation so that you may make subsequent contact via simplex is permitted.

Many of the parks will qualify for WWFF, VKFF and a local award scheme. Check operating conditions to ensure your activatic is valid.

For park activations (WWFF, KRMNPA or SANPCPA), there are no defined location for an activati other than you must be inside the boundaries of the park. For a Marine park (MP) you can operate at a maximum of 100 m from Park boundary.

There are 1200 SOTA peaks that reside with a park that qualifie the activation for both SOTA and WWFF. Generally a position within a national park will qualify but there are instances where a park c reserve can surround a point but be a different classification. Three examples:

- Mt Mitta Mitta Regional Park: the SOTA summit and all of its AZ are all within the Mount Mit Mitta Flora Reserve, which is surrounded by the Mt Mitta Mi Regional Park. Therefore the Summit does not qualify for bc SOTA and the RP, only for SO
- The Avon Wilderness Area is adjacent to the Alpine Nationa Park. An activation of Wellingt Plateau VK3/VT-007 with your station located in Avon Wilderness area VKFF-942 does not qualify for KRMNPA despite being adjacent to the Alpine National Park VKFF-619. However, you could mov your station to another area of the AZ that is within the Alpine National Park and attempt to gain contacts to qualify the lat Park.
- Wilsons Promontory Marine National Park VKFF-956 is adjacent to Wilsons Promonto National Park VKFF-539.

Class	Operating Status	Contacts to Activate	Contacts to Qualify
SOTA	Portable	1	4
WWFF	Mobile	44	Cumulative
VKFF	Mobile	10	Cumulative
KRMNPA	Mobile	1	
SANPCPA	Portable	1	

You could operate from an appropriate land location inside VKFF-539 within 100 m of the boundary of VKFF-965 to claim the latter. Note that you cannot claim such contacts for both Parks! It is one or the other only.

re you planning on heading out activate a park? Here are some pinters to ensure it is a successful nd enjoyable experience and elp you fill up your log book by tracting park hunters:

Don't spend hours travelling to the site. Select a park close to you. Many have toilets and picnic facilities making them suitable for an extended activation.

The secret is in the antenna. Both VKFF and KRMNPA programs allow for operations from mobile. I encourage all to take the next step and setup out of your car. This presents a better view for any and gets you the amateur outside in the environment which is the intent. At the very least, set up an external antenna, which is highly likely to have much higher radiation efficiency than a car-mounted antenna.

Place your intentions on as many forums as possible, e.g. Facebook, Yahoo group, parksnpeaks.org and/or SOTA Watch.

Be patient. You may not get any callers at first, so persevere and keep calling CQ.

If you can't get out yourself, remember that many of the National Park activators will be seeking the required 44 QSOs for the WWFF global award program. So the more calls they receive, the better. You can help by spotting the activity.

Sites for Alerts and Spotting

"**Spotting**" is where you can add details of stations you have worked or heard. This allows you to share information with other amateurs.

"**Alerting**" is where you can add details of your proposed activations, so people can see your future plans.

WWFF Forum

http://forum.wwff.co

Activators are encouraged to place their intended activations on the WWFF Forum. A huge number of European amateurs read the Forum and will be able to see your intentions.

SOTA Watch

SOTAWatch.org

This is site for spotting and alerting SOTA activity.

ParksnPeaks

http://ParksnPeaks.org/

The local site ParksnPeaks offers spotting and alerting facilities for VK activity including QRP operation, National Parks, Conservation Parks, or portable operation in general.

Don't forget you can spot activity to the **DX Cluster** network: *http://www.dxwatch.com/*

Other sources of park information

http://wwffaustralia.weebly.com
http://www.vk5parks.com/

Yahoo groups

You can post on the World Wide Flora Fauna or Parks Yahoo groups:

https://au.groups.yahoo.com/neo/groups/SOTA_Australia/info

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

http://au.groups.yahoo.com/neo/groups/sanpcpa/info

http://au.groups.yahoo.com/neo/groups/wwffaustralia/info

Facebook site

VK5 Parks Award
https://www.facebook.com/groups/528980233 908284/

SOTA
https://www.facebook.com/groups/959490830770023/

WWFF
https://www.facebook.com/groups/WWFF44/

Don't forget the **Summits and Parks event**: 24-25th October 2015

Venue: Wagga Wagga Amateur Radio Club

Open to all interested parties. New or experienced, young or old, all you need is an interest in operating portable. All are Welcome.

For more details contact: *seminar2015@parksnpeaks.org*

Participate

Summit and Parks event 24 - 25 October

Venue: Wagga Wagga Amateur Radio Club

For more details contact: ***seminar2015@parksnpeaks.org***

Contests

James Fleming VK4TJF
e *vk4tjf@wia.org.au*

Contest Calendar for October 2015 - December 2015

Month	Date	Starts at	Spans	Name	Mode
October	**3th - 4th**	**0800 UTC**	**24 hours**	**Oceania DX contest**	**SSB**
	10th - 11th	**0800 UTC**	**24 hours**	**Oceania DX contest**	**CW**
	17th - 18th	1500 UTC	24 hours	Worked All Germany contest	CW/SSB
	24th - 25th	0000 UTC	48 hours	CQ WW DX contest	SSB
November	7th – 8th	1200 UTC	24 hours	Ukrainian DX contest	CW/SSB
	14th - 15th	0000 UTC	48 hours	WAE DX contest	RTTY
	14th - 15th	**0100 UTC**	**24 hours**	**Spring VHF/UHF Field Day**	**CW/SSB**
	28th - 29th	0000 UTC	48 hours	CQ WW DX contest	CW
December	6th	0000 UTC	24 hours	Ten-metre RTTY contest	RTTY
	12th - 13th	0000 UTC	48 hours	ARRL 10 metre contest	CW/SSB
	19th	0000 UTC	24 hours	OK DX RTTY contest	RTTY
	19th - 20th	1400 UTC	24 hours	Croatian CW contest	CW
	19th	0000 UTC	24 hours	RAC Winter contest	CW/SSB

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

Oceania DX Contest

The premier contest this month is the **Oceania DX Contest.** Even if you are a little pistol station, when you participate in the Oceanic DX Contest you feel like a big gun station. Big pile ups are a common. There are many operators all around the world wanting to work you. Every station in Australia is in demand. The reason is that the contest has become internationally popular. From European stations to North American stations they will all be there, so this contest really tests your ability to work large pile ups, and weak signals. It's so popular because it is a fun and easy contest. The results come out in a timely manner and the certificates are downloadable as a PDF file.

The Oceania DX Contest is divided in to phone and CW. Phone is the first weekend in October that happens to fall on 3 and 4 October this year. The CW contest is on the second weekend in October 10 and 11 this year. Times for both are from 0800 UTC Saturday to 0800 UTC Sunday. The rules of the game are to make as many contacts as possible both inside and outside of the Oceania region, if you are in the region; everyone else only gets points for contacts with stations within the Oceania region. High power is up to 1500 watts and low power 100 watts, and QRP is not more than 5 watts. QSO alerting assistance is allowed along with remote operation.

Entry categories are single operator high, low power, QRP, and multi-operator single, two, or multi transmitter. The exchange is RST and a sequential serial number starting at 001. If a station does not give a serial number and a contact is made no problem just list them as 001, however I don't think this will be much of a problem. The multiplier is the number of valid prefixes worked. The contact points per band are broken down as follows. 20 points on the 160 m band, 10 points on 80 m, 5 points on 40 m, 1 point on 20 m, 2 points on 15 m, and 3 points on 10 m. Well that's it in a nut shell, pretty basic if you ask me. The easiest way to log the contest is using the VKCL software and let the program give you your score and submit your log electronically via email. There is a vast array of plaques to earn, including for the highest scoring newcomer from Oceania in the phone and CW sections.

CQ WW DX Contest SSB

Now if you have not got enough contesting out of your blood by the end of October, there is another good contest for you the **CQ WW DX Contest SSB**, and this one offers some nice things for those who do things the classic way, without computers and for those that like to QRP. So without further ado the goal is to work as many other amateurs in other zones and countries. Bands are 1.8, 3.5, 7, 14, 21, and 28. Exchange is the RS plus the CQ zone number. You get 3 points for working a station on a different continent, and 1 point for contact with countries on the same continent. The multipliers are the different zones and countries. You can do single operator high-power 1500 watts, low power 100 watts, or QRP 5 watts, assisted or Rookie or classic. Rookie if you have been licensed less than three years befor the start of the contest. And classic you can only use one radio, no QSO alerting assistance, only operate 24 of the 48 hours, and if you take a break it has to be for at least an hour. There is also multi-operator one, two, or multi transmitter. The dates are October 24-25, starts 000 UTC Saturday to 2359 UTC Sunday Any single operator competing for a top three finish at the World, Continent, or USA level, must recor the transmitted and received audio as heard by the operator for the duration of the contest operation.

So have a great contesting month as have a listen to all the signals on the band.

73, James Fleming VK4TJF

2015 Winter VHF-UHF Field Day: correction

oger Harrison VK2ZRH

ow embarrassment! (as comedy character, "Effie" [1], wont to say). An unfortunate error slipped through in e Field Day results published in the September issue *AR* and on the WIA website.

Matt Hetherington VK2DAG actually scored 1832 points, winning First Place in Division 1, Section A1, All-bands, Digital (Portable, Single Operator, 8 Hours). This is rather better than the 442 points reported previously. My apologies to Matt.

[1] *https://en.wikipedia.org/wiki/Effie*

Spotlight on SWLing

Robin L Harwood VK7RH
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is October and already there is armer weather, after a very cold inter here in Launceston. On 4 ctober, Tasmania advanced their ocks by one hour to be UTC+11. SW, Victoria and the ACT also articipate. South Australia usually dvances to UTC+10:30 but I azily recollect that the government Adelaide has been debating hether to permanently change to AST. I am not aware if this was nally given the go-ahead. So I think at South Australia will opt for the atus quo. Of course, the Northern erritory will remain at UTC+9:30 nd Western Australia will remain n at UTC+8:00. The Westralians ave trialled DST but it proved to be xtremely unpopular.

Most of Western Europe everts to standard time on 25 ctober, which is when the ITU as scheduled the commencement f the B-14 period to take ccount of propagation changes nd programming timing. I was omewhat surprised to note that he Russian Federation did not tilise DST, opting instead to retain tandard time this past northern ummer. This caused confusion with neighbouring states, such as Ukraine and the Baltic States which chose to go with DST. It looks as if there could be disillusionment with the concept of Daylight Saving. Incidentally North America reverts to Standard Time on 1 November.

I am frustrated at the state of my hearing loss. I still experience difficulties with speech and particularly music. As I have previously mentioned, there are no hassles with reading CW. There is plenty of activity within the CW segments of amateur allocations but it has largely been abandoned by utility services. However it is still extensively used by the Russian and CIS military. A drawback is that they operate in both international and Cyrillic alphabets. Numerals seem to be identical in both codes.

I recently managed to tune around the 25 metre broadcasting allocation on the Icom ICR-70 and was very surprised to note the lack of ambient noise. There were several strong signals around 1230 UTC and the majority of them seemed to from the PRC. 31 metres seemed very quiet in comparison. Signals could have been present but there was an ionospheric disturbance at the time plus my hearing hassles. I did attempt to try around breakfast time but my neighbour has a plasma TV.

It looks as if I finally have NBN connected. External cabling has been installed in the village and all that is now required is for the internal works to be completed. I probably will opt for a new ISP as well. Whilst on computers, Windows 10 was downloaded during the first week of August and there were a few minor hassles. My audio briefly would not function but was able to rectify this by a cold reboot. Also the OS took ages at first to come up and this was also rectified by turning the AC off at the mains. Since then I have not experienced any problems.

Apparently Indonesia has returned to shortwave, after falling silent in March. It has been monitored on 9525.9 at various times. It is scheduled to be in English to Australasia from 1000 UTC and to Asia at 1300. Incidentally North Korea decided to alter their time zone on 15 August from UTC+9 because it was imposed by the "Japanese imperialists". Now the Standard Time there is UTC+8:30, which has resulted in transmissions from Pyongyang being on half an hour earlier than previously scheduled.

Well that is all for now. Good monitoring from VK7RH.

VHF/UHF - An Expanding World

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Digital DX Modes

Rex Moncur VK7MO

Iceland on 2 metres EME

Ian VK3AXH reports working Benni TF3CY in Iceland on 2 metres on 6 August; later Phil VK4CDI and Wayne VK5APN also worked Benni in Iceland. Benni gave Ian -26 dB and Ian gave Benni -16 dB. This is believed to be the first VK to Iceland 2 metre contact.

Reduced Radiosonde data across the Great Australian Bight

Radiosonde data is extremely useful for understanding long distance VHF to Microwave propagation across the Bight. This data can be obtained from the University of Wyoming site (http://weather.uwyo.edu/upperair/sounding.html) and dropped into a spread sheet to produce graphs of the radio refractive index to identify ducts (copy of spreadsheet at *http://www.vk3hz.net/Esperance.xls*). An example of a duct, as processed on this spreadsheet, that produced the 10 GHz World record between VK6DZ and VK7MO was shown in *AR* of March 2015, page 21. Unfortunately, the Bureau of Meteorology is closing some radiosonde stations and many do not now operate on a daily basis as in the past. The Bureau has provided the following information on the current program for the collection of radiosonde data across the Bight, but also advised that this program will vary according to staffing levels and program requirements. The Bureau also advised that Mt Gambier and Eucla no longer perform radiosonde flights.

DL0SHF 10 GHz EME Beacon

This beacon normally runs 40 watts to an 8 metre dish (Photo 1) with JT4g on even minutes. It is located at JO54cg in Germany and operates on a nominal frequency of 10368.025 MHz (although in recent tests it was 900 Hz low). It starts transmitting when the moon's elevation at JO54cg is clear above the horizon at about 6 degrees. When it first became operational

Photo 1: DL0SHF beacon dish with Per, DL7LG.

		Sun	Mon	Tues	Wed	Thur	Fri	Sa
Albany	2315 Z	Yes		Yes		Yes		Yes
Esperance	2315 Z		Yes		Yes	Yes	Yes	
Ceduna	2315 Z			Yes				
Adelaide	2315 Z & 1115 Z	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Melbourne	2315 Z & 1115 Z	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Figure 1: Radiosonde program for stations across the Great Australian Bight.

2238	-9	3.03	982	*	DL0SHF 38TON	*	A
2240	-9	3.03	984	*	DL0SHF 40KUR	*	A
2242	-8	3.03	984	*	DL0SHF 42JOC	*	A
2244	-8	3.03	984	*	DL0SHF 44PYN	*	A
2246	-8	3.03	984	*	DL0SHF 46TEN	*	A
2248	-8	3.03	984	*	DL0SHF 48WYM	*	A
2250	-8	3.03	984	*	DL0SHF 50BUZ	*	A
2252	-8	3.03	984	*	DL0SHF 52RAD	*	A
2254	-8	3.03	982	*	DL0SHF 54RON	*	A
2256	-8	3.03	982	*	DL0SHF 56TUC	*	A
2258	-8	3.03	984	*	DL0SHF 58ROM	*	A
2300	-8	3.03	987	*	DL0SHF 00HUF	*	A
2302	-8	3.03	987	*	DL0SHF 02FOD	*	A

gure 2: Examples of beacon signals received on K7MO's 77 cm dish.

bout two years ago, signals were ry weak in VK on VK7MO's 77 n dish and while sync could be tected, it was not possible to hieve a decode. There was at that ne a problem with tracking. Recent sts (Figure 2) have shown that it can w be easily copied with a 77 cm sh with around 8 dB to spare. Thus should be readily copied with small to 60 cm dishes as are typically ed for terrestrial work. One issue that to receive it in VK we need to e vertical polarization, so you might ed to rotate your system 90 degrees ing a right angle bracket (example VK7MO's 77 cm dish rotated by 90 degrees at Photo 2).

The typical signal level of -8 to -9 dB would allow around 8 dB to spare to achieve decodes on the Convolution Decoder and more than 12 dB in reserve to achieve sync. This would suggest that under good conditions the beacon could be copied with a dish of around half the size or about 40 cm. Note that there is a random 5 character group of letters and numbers after the callsign which can be used to confirm reports of reception of the beacon. The DT in this case was 3.03 seconds compared to a Moon delay of around 2.55 seconds so there might be an error in the timing on the beacon. In the above example the receiver was corrected for Doppler using WSJT-X r5604. This is available from G3WDG's web site at *https://drive.google.com/file/d/0B116lwQIUFNTV1NlRnpZeHY3a2s/view?usp=sharing*

Please send any Digital DX Modes reports to Rex VK7MO at *rmoncur@bigpond.net.au*

hoto 2: VK7MO's 77 cm dish and system rotated to Vertical Polarization to ceive DL0SHF beacon.

Meteor Scatter

Dr Kevin Johnston VK4UH

The Perseids Meteor Shower came and went on 13 August. This is a major Meteor Shower and produces some of the best MS activity of the year – but only if you live in the northern hemisphere.

Although having a ZHR often exceeding 100/hour, the shower only just "peeks" over the northern horizon even here in VK4. At this QTH (QG62kp), there was some brief enhancement of pings from the two northern VK 6 m repeaters during the peak but no QSO eventuated. Currently there are few regularly active MS stations on from FNQ.

This month I intend to focus 6 m Meteor Scatter (MS), an area of activity where there seems to be rapidly increasing interest. With meteor scatter propagation at its annual minimum for the year, 2 m MS contacts have been difficult to complete even during the pre-dawn peak. I suspect many operators have elected to stay in bed rather than brave the cold shack for the normal weekend activity sessions. At the same time "more traditional" propagation modes on 6 m have also been suffering the "winter blues". Over the last month or so there has been an upsurge in 6 m digital MS activity on Saturday and Sunday mornings as a number of established stations have moved down from 2 m. See Figure 3 below. At the same time a number of new (to MS) calls have been appearing with stations taking advantage of the only propagation mode still giving QSOs on the otherwise dead band.

As has been discussed here previously, as frequency gets lower and wavelengths longer then meteor pings tend to become both "longer" in duration and "louder" in signal strength. On mornings when meteor pings on 2 m are infrequent, brief and faint, making contacts very hard to achieve, the corresponding

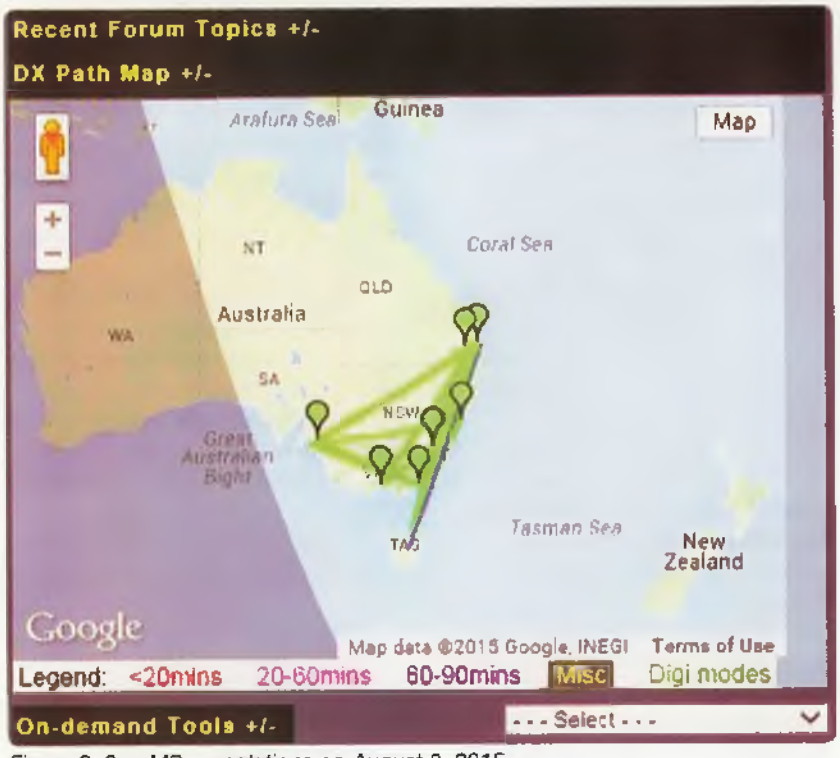


Figure 3. 6 m MS completions on August 8, 2015.

returns on 6 m may still be very usable and QSOs easy even with modest equipment, power levels and antenna systems. Further the "usable" peak of meteor returns, which in generally deteriorates rapidly after dawn on 2 m, appears to extend well into daylight on 6 m.

Last month I reported on attempts to cross the Tasman on 6 m MS between stations in VK4 and VK2 across to ZL. Scott VK4CZ (QG62lp) reported partial success between his QTH and Bob ZL1RS (RF64vs) at 2170 km and with Mark ZL2WHO (RE79tp) at 2541 km. My understanding though is that although pings have been decoded in both directions, successful completion to VK4 is still awaited.

From further south however the gap has been bridged. The following report was received from Norm VK3DUT (QF32vf) at Johnsonville near Lake Entrance:

I completed a 6 m MS contact with Bob ZL3TY on 13/08/15 @ 2035 UTC, 2050 km and with Peter ZL4LV on 22/08/15 @ 2008 UTC, 2076 km. I have also decoded CQs from Roger ZL3RC, 2165 km and Rod ZL3NW, 2180 km but they have yet to see me, Peter and I have had decodes previously but had not completed. Bob also had decoded me during the previous week but was not tx'ing at that time. I think we're already stretching the limit and this needs patience and dedication but the end result can be very satisfying! I guess the next challenge would be to make it to ZL1 and ZL2 where the distances are even greater.

At his station Norm says he runs an old FT690R Mk1 with 120 watts to a bay of 4 x 7-element home-brew quads at about 50 feet (15 m).

Thanks also to Cliff VK2NP (ex VK2CJJ) QF56ma in Sydney who sent in a receive-only report of multiple successful decodes of my 6 m signals, at good signal strengths, using only a quarter-wave vertical antenna at his QTH. Being cross- polarised to me and at the relatively short distance of only 756 km, this is a great result and shows how simple 6 m MS can be.

Also demonstrating the rising interest in 6 m MS, a thread appeared in July on the VK Logger Discussion Forum under the Meteor Scatter heading entitled "6 m Meteor Scatter for Standard Calls" originated by Col VK4MIL in Brisbane. Under the current frequency allocations, the recent general release of frequencies between 50 and 52 MHz was only extended to Advanced Licence holders. Standard Calls at the present time are restricted to frequencies above 52 MHz. Whilst Standard calls are licensed for digital operation, including FSK44, until the much anticipated relaxatic of the 52 MHz restriction is lifted then they are unable to join the activity on 50.230, the main focus frequency for VK 6 m MS. There is nothing of course to stop Standarc calls using digital MS higher in the band. The main theme of the Forui thread was therefore to promote activity on 52.230 FSK441 as an alternative to the standard focus frequency at 50.230 MHz. The thread stirred up significant interes amongst Standard and Advanced calls alike and much discussion ha occurred about how to get antenn to work effectively across both par of 6 m. Col VK4MIL also reported successful completion of MS contacts with Darrell VK2BLS on the higher frequency using a simpl home-brewed 2-element Moxon antenna scaled to 52 MHz. I woulc encourage everyone to have a look at Col's thread on the Forum under Meteor Scatter.

The appearance of many new callsigns on 6 m Meteor Scatter is very welcome. Over that last few months there appears to be a "de facto" parallel activity session running on 50.230 MHz alongside the well-established 144.230 MHz activity. Many operators are clearly switching between the two focus frequencies, as conditions change some appear to be operational on both simultaneously.

Like any new mode there is a learning curve to negotiate when

rting out with digital MS in terms driving the software, formatting reports and exchanges etc. d with following the expected erating protocols. Earlier this ar I published a short article *AR* entitled "Surviving your t Meteor Scatter Contact". ended for newcomers to MS aid out the normal operating actices used here in VK and ZL luding exchange and report ucture, operating frequencies d times and transmissions times . The why, when, where and w to get going on MS. I would courage anyone starting out thinking of doing so to have a k at this guide. One common ea of confusion is around which nsmission "period" should be ed. In FSK441 mode, each minute divided into two transmitting riods. The first period runs from top of the minute (0 seconds) 30 seconds. The second period en runs from 30 seconds back to 60 seconds. Each station nsmits in one period and receives ring the other. Obviously stations alternate ends of a path must operating in opposite periods herwise contacts are impossible. ar in mind however that during activity sessions there will be ny stations all sharing the same quency, half transmitting and half ceiving, all at the same time. If e station transmits out of order en that station will obliterate ception to all other stations that in direct range. To make it work, there is an established otocol in VK for selecting the rrect transmission period. This is ended to maximise the chances everyone making QSOs and nimising the possibility of causing RM to others. Obviously as a ensed operator we can transmit here and when we choose. We could all legally have a simplex QSO on the input of a repeater, could transmit on a satellite downlink or use SSB in a CW section of the band. But generally we wouldn't do that. We have agreed band-plans to guide our operating so as to maximise everyone's enjoyment of the hobby. Period selection is like a band plan. I would encourage all operators, new and not-so-new to review and follow these protocols to make sure we all remain "on the same page".

So in essence, during the Saturday and Sunday morning VK MS activity sessions on 144.230 MHz and 50.230 MHz, there are established practices for selecting the transmitting period in FSK441 mode:

- Stations in the southern call areas VK3, VK7 and VK5 ALWAYS run first period and beam North
- Stations in the northern call areas VK4 and VK8 ALWAYS run second period and beam South
- Stations in the middle call areas VK1 and VK2 CHANGE periods depending on the day.
  - During the Saturday sessions they run second period and beam South
  - During the Sunday sessions they run first period and beam North.

This allows most stations to work most paths.

So if it's Saturday and you are in Canberra and want to work a station you know is on-air in Brisbane, how do you do it? The answer is you can't. At least you shouldn't during that activity session, on that calling frequency. You have to wait till the Sunday. Were you to try and use first period on the Saturday then you would probably cause QRM to most other Canberra and Sydney stations on air with you, and would be unlikely to hear VK4 anyway as you would be drowned out by direct continuous signals from your own area.

How would you work from VK7 to VK3 or VK2 to VK1? Again you can never realistically try to do this during a normal weekend activity session without risking interfering with all your neighbours. At that distance you are likely to be able to make direct contact anyway. Bear in mind, if anyone wants to set up a sked to try such paths, this can be done outside of the activity session times, which only run for a few hours each week, or on another frequency e.g. 144.330 and 50.330 which are used as secondary MS focus frequencies.

The protocols are fairly well adhered to on the 2 m MS nets and I would encourage, indeed plead with all stations to follow the same practices on 6 m now that the activity levels are increasing on that band.

The next significant meteor showers on the calendar are the Orionids expected to peak around the 22nd October (ZHR 25/hr) followed by the Leonids (ZHR 20/hr) expected to peak around 18th November.

Finally this month: I have an ad-hoc e-mail list running where I can rapidly distribute notifications of expected activities or meteor showers and other news around the group of regular MS operators in VK and ZL. If you would like to be included on that mailing list please drop me an e-mail to the address below and I will add your address to the list.

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

The PEKS: a PICAXE electronic keyer shield for the PICAXE AXE-401 development shield base

Steve Page VK6HV

So what's a PICAXE chip?

A PICAXE chip is a standard Microchip™ PIC microcontroller that has been pre-programmed with the PICAXE bootstrap firmware code. This code enables the PICAXE microcontroller to be re-programmed "in position" directly via a simple three wire serial cable or a low cost USB cable and the free PICAXE software. No expensive conventional programmer is required. I personally use a homebrew serial cable for all my PICAXE projects but purchased a USB cable for this project.

The keyer shield base

The PICAXE™ AXE-401 development kit with the PICAXE-28X2 chip is available from Altronics for less than 20 dollars. It's an Arduino compatible shield base with the ability to accept many different types of shield boards like Ethernet, MP3, stepper motor controller, motor PWM, LCD, GPS, GMS etc. etc.

Done experimenting?

Are you currently experimenting with the PICAXE AXE-401 development shield base? Have you had your fun with it? Have you boxed it back up? Not sure what to do with it? Why not make a simple yet small Morse code electronic keyer!

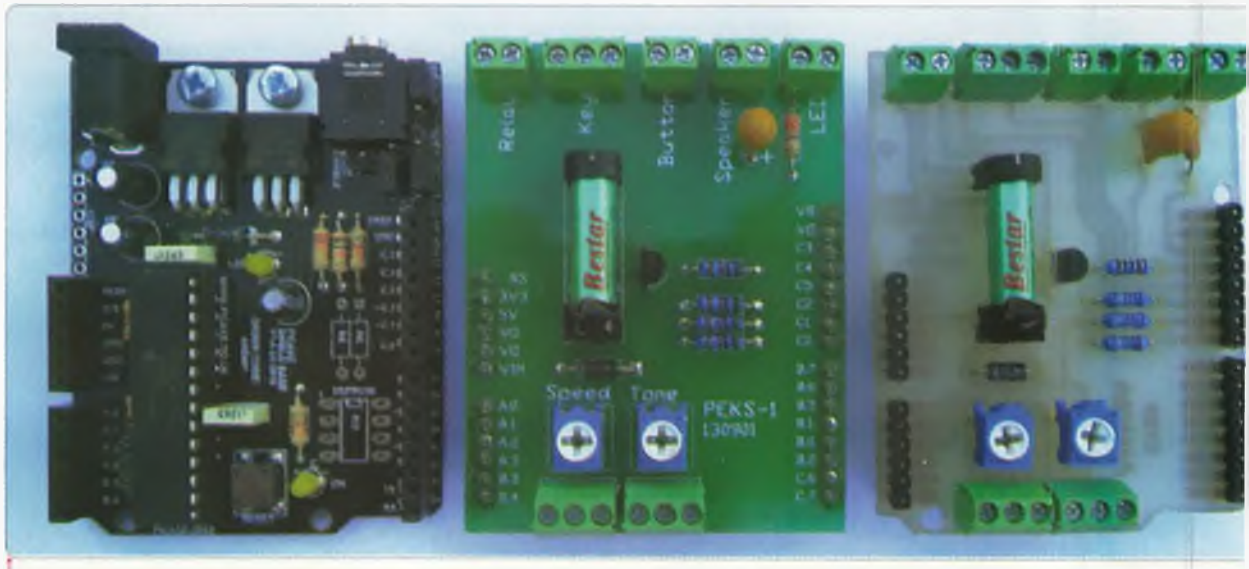
Searching and searching

Not wanting to reinvent the wheel, I searched the internet. After numerous searches, not one electronic keyer shield project could be found. So it was off to the back yard shed to make one.

The Prototype shield board

The prototype keyer shield artwork was painfully made with MS Paint. This can be exhausting on the brain as you have to continuously remember trace width, pad size, component pin out dimensions, scaling, mirror image etc. etc. It definitely keeps the mind active. Laser printing to high gloss photo paper, transferring the image to prepared copper with a cheap laminator and etching with ammonium persulphate was the technique used. The main probler with the prototype keyer shield is the header pins need to solder to the top of the keyer shield board while all the other components solder to the bottom of the board. This requires a double sided circu board which I cannot produce in the shed. Hence the reason the .BMP art work was sent out to be professionally made. Figure 1 shows the PICAXE board, the professionally made board and th prototype board.

Photo 1: All three boards.



ıe finished shield board

/ou decide to build this project, nember the header pins solder to ə component side of the board. ınnections to the shield board ə all made with screw type edge nnectors. The RELAY terminal is ıormally open contact from the ɔd relay. A reed relay was used e to its speed of operation and ietness. I have used other small ays in past keyer projects and ɔy tend to sound like telegraph unders. The KEY terminal is an iambic paddle key. The ntre screw of this terminal is the mmon. The BUTTON terminal ˈor a momentary, normally en push button of your choice. e SPEAKER terminal is for the nnection of a small two inch eaker for side tone. The LED minal is for a 5 mm LED and colour is your choice. Figure hows the circuit and Figure 2 ɔws the circuit board layout. The ard is 68.8 mm (2.70") high by .3 mm (2.10") wide.

ıe code

st of all, I would like to point t that I am not a programmer profession or as a hobbyist. I finitely burned the midnight oil on ɜw occasions. In the end, I simply ɔd around with the code until I t it to do what I wanted.

Assuming you're knowledgeable h the PICAXE development eld base, apply power and wnload the BASIC code into the ;AXE-28X2 chip with the free ;AXE software.

The BASIC code, schematic d more can be found here: *http://mbers.westnet.com.au/page3/ex.htm*

Whenever power is applied, code will immediately start to ɛcute. Upon power up, you will ve 3 blinks of the LED or about econds to determine what the ver does. If you do nothing upon wer up, it will always be an ıbic Mode B keyer. I personally ɛ Mode B but it seems to be the /our of the day.

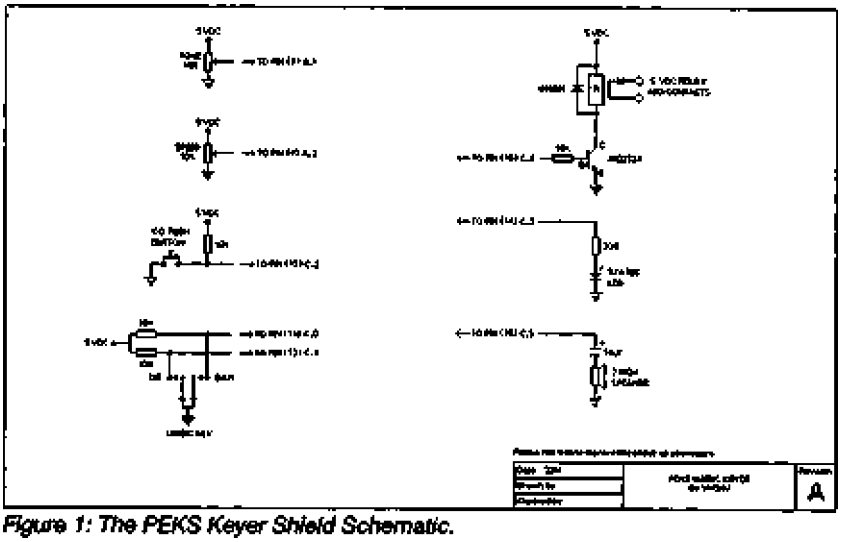
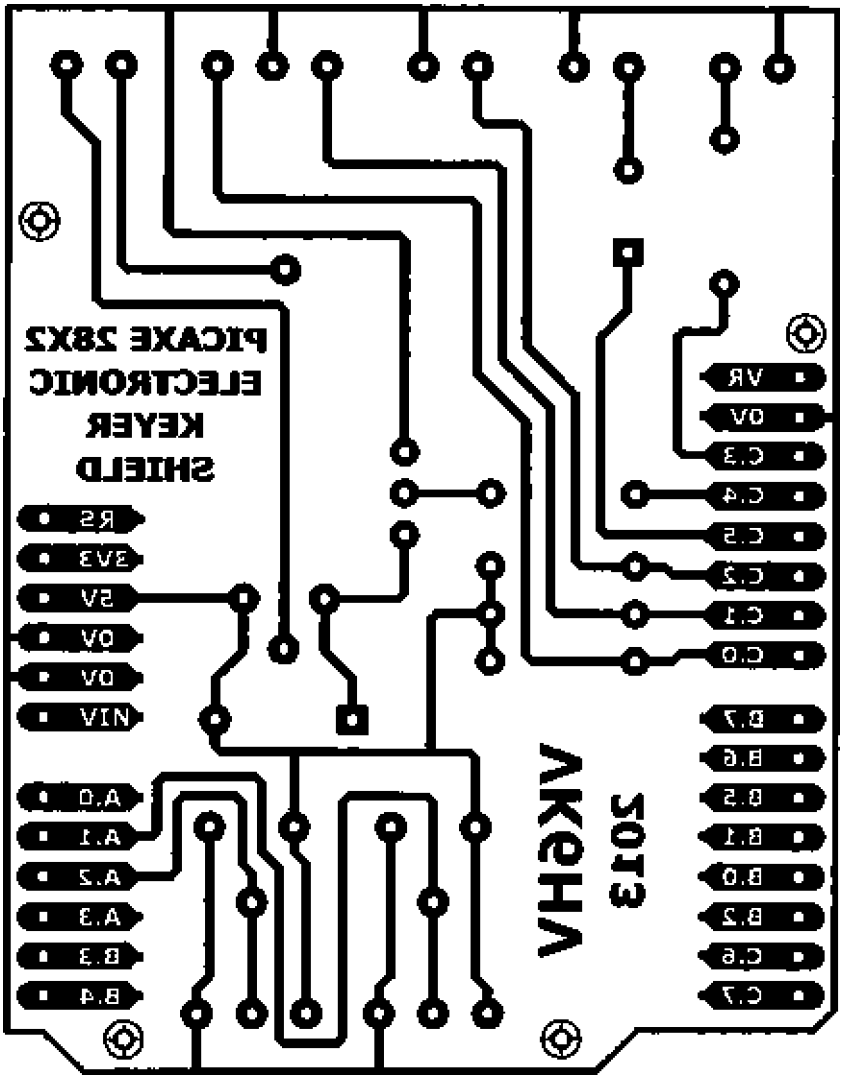


Figure 1: The PEKS Keyer Shield Schematic.

Figure 2: Board.



Upon power up...

Keyer Modes:

1. Do nothing for two seconds = Iambic Mode B
2. Hold the Dot paddle closed = Iambic Mode B Auto Spacing
3. Hold the Dash paddle closed = Iambic Mode A
4. Hold both paddles close = Iambic Mode A Auto Spacing

Practice Modes: (in groups of 5)

5. Push button closed = letters
6. Push button, Dot paddle closed = simple punctuation
7. Push button, Dash paddle closed = numbers
8. Push button, both paddles closed = letters, punctuation, numbers

A word about Auto Character Spacing

This is an interesting topic. I believe Auto Spacing or Auto Character Spacing being one in the same may have started with some of the old logic gate Accu-Keyers of the early 1970s or maybe even the single IC Curtis keyer chip from back in the day. Regardless, AS or ACS is a technique by the electronic keyer, "when required", to add two extra dit length spaces, in addition to the mandatory single inter element dit space, for a total of 3 dit spaces. These three dit spaces are the correct spacing between the end of one character and the beginning of the next character. This forced 3-dit space stops the operator from sending strings of characters together.

Those expert CW operators who use a keyer with ACS enabled would not notice anything unusual. When I tried ACS for the first time I was disturbed by it. This was actually my electronic keyer trying to tell me I was not keeping good timing while sending. Over time and with practice, it has helped me not to run characters together and send more proficient code.

How to exit the modes

If you're in a CW practice mode, just squeeze both key paddles and the code will return to the 8 menus. If you're in a keyer mode, momentarily press the push button and the code will return to the 8 menus. If you press the pushbutton for more than about 2 seconds, this will send the CQ CQ message. The default is CQ CQ VK6HV, so remember to change my call sign to your call sign in the BASIC code before downloading to the PICAXE chip.

Bill of Material

Jaycar Electronics	
5V DC Reed Relay	SY4036
2N2222a Transistor	ZT2298
Green LED	ZD0170
1N4001 Rectifier	ZR1004
10 uF Tantalum Cap	RZ6655
330 1/2 Watt Resistor	RR0560
10k 1/2 Watt Resistor	RR0596
10k Potentiometer	RT4360
Altronics	
2-way terminals	P2028
3-way Terminals	P2029
Header Pins	P5430

Conclusion

The PICAXE-28X2 chip has 4 memory slots, slot 0 - slot 3. Each slot has 4096 bytes available. In this project the BASIC code only uses 1,030 bytes of slot 0. This means there is a huge amount of code space unused for project improvement. Feel free to make changes and improvements.

For those interested in adding PEKS shield board to their PICAXE or Arduino shield base, I have a very limited quantity of boards. They are $5 dollars each. This includes postage.

Notes

1. If you're going to experiment with this project, then solder the Jaycar 10k PCB mounted potentiometers onto the PEKS shield board. If you are going to mount the PICAXE shield base and PEKS shield board into a chassis, do not use the Jaycar 10k pots. Use panel mounted 10k potentiometers of your choice and wire up the pots to the green edge connectors.
2. In Morse practice modes, it is probably better to let the keyer key your rig with the side tone on and the break-in off as your radio sidetone audio quality is better than the PICAXE speaker audio.
3. The PICAXE software can be found here: *http://www.picaxe.com/*
4. If you have dots and dashes on the wrong paddles, just swap the other two key wires.

VK100ANZAC in Perth WA

ob Bristow VK6POP

oto 1: The station set up at the War Memorial on the estuary at Mandurah.

e recent VK100ANZAC activation Perth commemorated the August fensive at Gallipoli. Organised members of WA Amateur Radio ws Inc., the event was also pported by other amateurs.

Not long after the landings Gallipoli in April, an event that unched Australia and New aland into global conflict for the st time, the forces on both sides g in and there was little progress ade towards capturing the territory at guarded the Dardanelles.

With the opposing forces adlocked, a new offensive was launched in early August. The plan called for allied troops to capture the Sari Bair range north of Anzac, while the British made another effort to break out at Helles. Simultaneously, British troops would land further north at Suvla Bay. It was an overly ambitious plan, but something had to be done to break the stalemate.

On 6 August the Australians launched a diversionary attack at Lone Pine. The main Turkish trenches were captured, but bitter hand-to-hand fighting lasted four days. This terrible battle cost 2,277 Australian casualties. An attack at The Nek early next morning was intended to coincide with the capture of Chunuk Bair. Four waves of Australian light horsemen were ordered to rush this narrow strip of ground. But plans went awry and coordination was lost. They were mown down by machine-gun fire in a futile affair: of the 600 men who went forward, almost 400 became casualties.

The offensive had failed, and the stalemate resumed. The campaign on Gallipoli was eventually abandoned, and the troops

withdrawn from the peninsula in December 1915. There were eight Victoria Crosses awarded to Australians as a result of the August Offensive.

The Activation of VK100ANZAC ran from Thursday through to Tuesday, and operated from several venues with World War significance.

The main base was ANZAC cottage in Mt Hawthorn, a house built in a single day by the community of Mt Hawthorn in 1916 to provide a home for a returned, wounded soldier. This house was recently renovated and restored, and is managed by the Vietnam Veterans Association of WA, who were very generous and welcoming to the project and the door is open for further events.

Other venues were the Blackboy Hill Memorial, on the site of a World War One military training camp on the Darling Escarpment East of Perth, The War Memorial on the estuary at Mandurah *(Photo 1)*, and Kings Park, the site of the State War Memorial, Regimental and campaign memorials, and a vast number of trees planted in memory of people killed in action. The venue planned at Stirling Square, Guildford, was abandoned in favour of ANZAC cottage due to lousy weather.

Setting up portable stations at a different site every day presented challenges, and probably the most impressive was the folded dipole suspended between two ten metre masts that were erected at ANZAC Cottage. It certainly attracted the attention of neighbours in this inner Perth suburb.

A couple of suburban local newspapers published articles with photographs of Blackboy Hill and Anzac Cottage. During the Mandurah activation, Onno VK6FLAB was interviewed live on ABC South West Radio.

As with most activities, the bulk of the organisation and on the spot work fell on a small handful of people, however several people

Photo 2: Preparing the mast at ANZAC Cottage.

hoto 3: VK100ANZAC mast and antenna at ANZAC Cottage, Mount Hawthorn, WA.

turned up at the right time to help build up and break down the equipment, and to operate the station, and there were others who dropped in out of interest, some bearing coffee and food, some having a go at operating the station.

Thanks to the WIA for sponsoring the licence and coordinating the ANZAC Centenary, and thanks to everyone for your help and participation.

73

Bob Bristow VK6POP

Photo 4: The VK6 operating team for VK100ANZAC at ANZAC Cottage.

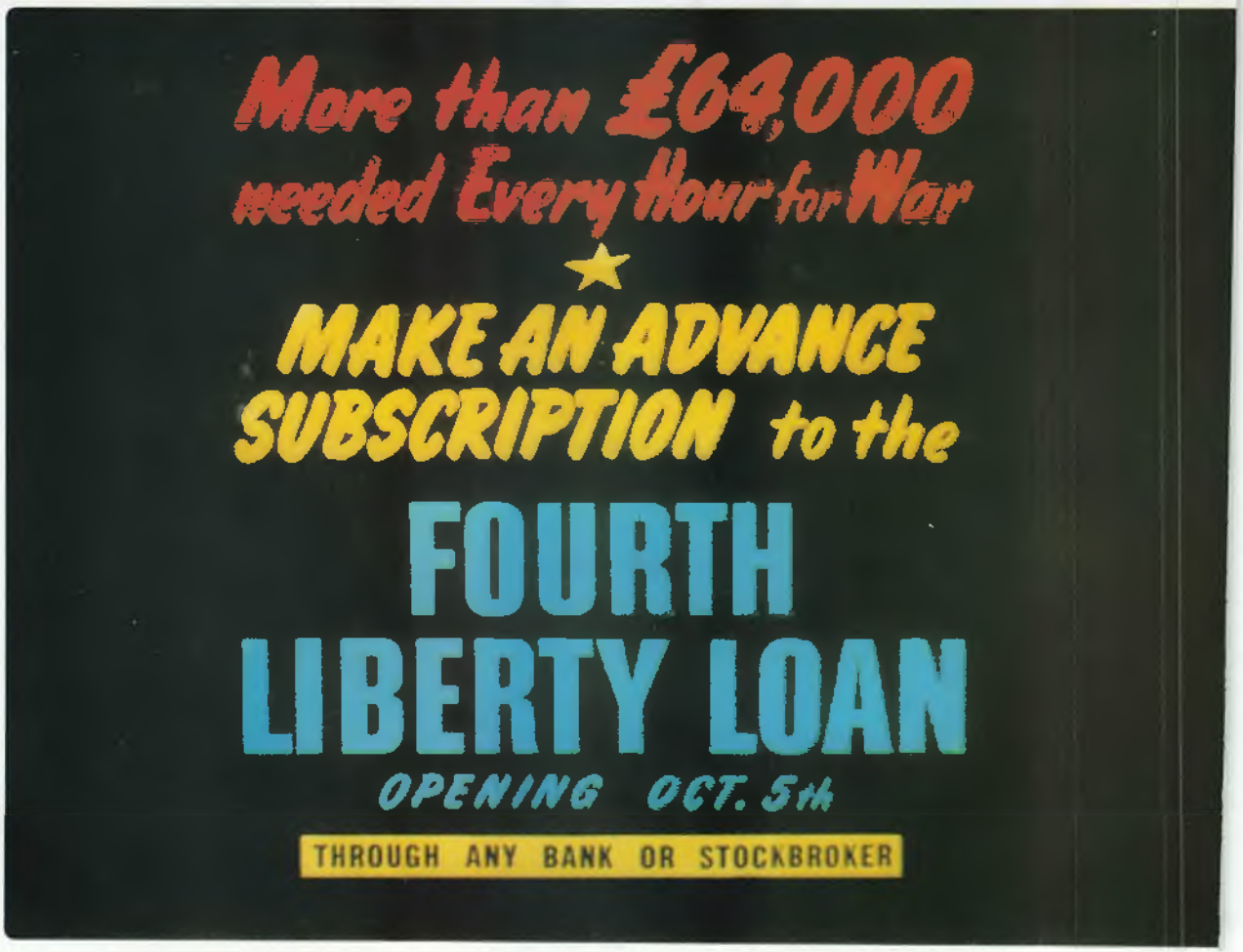
Theatre Advertising Slides

eter Wolfenden VK3RV

the days of the Picture Palaces, dvertising slides were shown ior to the commencement of the st half of the program and then ain after interval, prior to the mmencement of the feature film.

The slides were often accompanied by a pre-recorded naration and background music usually recorded on an "Acetate disc" and played on the "non-synch" turntable – an old term from the days of "synchronised turntables" which were used with sound on disc films and mechanically linked to the film head of the projector so that "lip synch" could be obtained (i.e. the picture and sound were synchronised). The assistant projectionist would change the slides every ten seconds or so.

Continued on Inside Back Cover



Contributions to *Amateur Radio*

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

Your contribution and feedback is welcomed.

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

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

About Hamads

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

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

ADVERTISERS INDEX

WIA Functional Committees

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

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

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

WIA Committee Charters

Spectrum Committee

(Regulatory, ACMA, ITU, IARU, Repeaters & Beacons, Standards, Interference & EME, Monitoring Service)
Geoff VK3AFA, Phil VK2ASD (Director), Peter VK3MV, Roger VK2ZRH (Director), Brian VK3MI, Dale VK1DSH, Peter VK3APO, Richard VK2AAH, Gilbert VK1GH, Rob VK1KRM, Noel VK3NH, Doug VK3UM

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

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

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

Administrative Committee

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

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

Communications, Marketing, Publications and AGM Committee

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

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

Education Committee

Fred VK3DAC (Director), Owen VK2AEJ, Ron VK2DQ, Mal VK3FDSL (Office Manager)

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

Radio Activities Committee

Chris VK5CP (Director), Geoff VK3TL

Contests sub-Committee

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

Awards sub-Committee

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

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

QSL Card sub-Committee

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

Historical and Archive Committee

Peter VK3RV, WIA Historian, (Leader), Drew VK3 Linda VK7QP, Martin VK7GN, Ian VK3IFM, Will VK6UU, David VK3ADW, Jennifer VK3WQ/ VK5ANW, Roger VK2ZRH (Director)

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

IT Services

Robert VK3DN (Director), Tim VK3KTB

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

Community Service Committee

Fred VK3DAC (Director), Greg VK2SM (Assistant Treasurer), Ewan VK4ERM (Director), Paul VK5P

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

New Initiatives

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

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

Affiliated Clubs Committee

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

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

re Advertising Slides

Continued from page 82

The slides were in fact glass, often with black and white photographic images about 80 mm square and which had been hand coloured. They were usually very bright and often composite images made up of real life photographs and captions were used. Subject matter included comming attractions, local trader's advertisments and national advertisments such as these.

Slides were made by a number of manufacturers, some of which came into existance during the days of the magic lantern showman, including Val Morgan and Sons, Gunns and Whitfords.

ICOM

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Icom Australia is offering a fantastic cash back promotion from 1st of September 2015 to 31st of October 2015 on ID-5100A and ID-51A PLUS purchases. Receive $100 cash back from purchases on ID-5100A and $50 on ID-51A PLUS. Simply purchase selected products from an Icom Australia authorised dealer and return the completed warranty card along with a proof of purchase to redeem cash back.

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