



OXTALES

First published 1980

Club Nets on VK2RPM
146.700MHz
(CTCSS 91.5Hz)
Sundays 0900
Thursdays 1930

Newsletter of the Oxley Region Amateur Radio Club Inc.,

PO Box 712 Port Macquarie 2444

Club email address: vk2bor@orarc.org also on Facebook as Oxley

Region Amateur Radio Club

Club Website: <http://www.orarc.org>



ORARC's forty ninth Anniversary Year

May 2020

PRESIDENT: Henry Lundell	VK2ZHE	6582 0534
VICE PRES: Paul Colledge	VK2ICQ	6580 9912
TREASURER: Dennis Meade	VK2DAM	6582 2998
SECRETARY: Henry Lundell (act)	VK2ZHE	6582 0534

ORARC VHF/UHF Repeaters

MIDDLE BROTHER

VK2RPM 2 metre (Voice - CTCSS 91.5Hz)
O/P 146.700MHz - I/P 146.100MHz

VK2RPM 70 cm (Voice - CTCSS 123Hz)
O/P 438.525MHz - I/P 433.525MHz
C4FM digital mode capability

VK2RPM-1 (APRS Digipeater)
SX 145.175MHz 1200bps

TELEGRAPH POINT

VK2RCN 2 metre (Voice)
O/P 147.000 MHz - I/P 146.400 MHz

VK2RCN 70 cm (Voice - CTCSS 123 Hz)
O/P 438.425MHz - I/P 433.425MHz

VK2RCN (6m Repeater)
O/P 53.800 MHz - I/P 52.800 MHz

VK2RCN-1 (APRS Digipeater)

President's Report



May 2020

COVID-19 – Meetings and 2020 Field Day Cancelled

While the COVID-19 restrictions are in force all ORARC face to face activities such as meetings and working bees are cancelled. The ORARC 2020 Field Day and Field Day Dinner have also been cancelled. The next Field Day and Field Day Dinner will take place during the 2021 Queens Birthday Long Weekend in June 2021. ORARC meetings will resume when the COVID-19 restrictions are lifted.

Your Committee is actively following the changes in restrictions as the number of new cases confirmed in Australia continues to fall. In the coming events in "Down the Coax", all ORARC face to face activities are shown as cancelled during April, May

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Down The Coax

ORARC meetings held in the S.E.S. Building
Central Road, Port Macquarie. Meetings cancelled.

While COVID-19 Restrictions are in force

Monthly General Meeting
Saturday 2 May 2020 2:00 pm Cancelled

World Telecommunication Day
Sunday 17 May 2020. AX prefix permitted

Friday Night Get-Together
Friday 15 May 2020 7.00 pm Cancelled

Monthly General Meeting
Saturday 30 May 2020 2:00 pm Cancelled

**ORARC Field Day Wauchope Showground
Hall**
Saturday 6 and Sunday 7 June 2020 Cancelled
Field Day Dinner Saturday Cancelled

Friday Night Get-Together
Friday 19 June 2020 7.00 pm Cancelled

Monthly General Meeting
Saturday 4 July 2020 2:00 pm Pending

Friday Night Get-Together
Friday 17 July 2020 7.00 pm Pending

Annual General Meeting
Saturday 1 August 2020 2:00 pm Pending

Monthly General Meeting
Saturday 1 August 2020 after AGM Pending

email Directory

Net Controllers' Roster

Nets on Voice Repeater VK2RPM 146.700 MHz

Sundays
(0900 Local)

Thursdays
(1930 Local)

May 2020

VK2FMGM	May 3	VK2ICQ	May 7
VK2FMGM	May 10	VK2EM	May 14
VK2FMGM	May 17	VK2ZHE	May 21
VK2FMGM	May 24	VKICQ	May 28
VK2FMGM	May 31		

June 2020

VK2FMGM	June 7	VK2ZHE	June 4
VK2FMGM	June 14	VK2ICQ	June 11
VK2FMGM	June 21	VK2EM	June 18
VK2FMGM	June 28	VKZHE	June 25

July 2020

VK2FMGM	July 5	VK2ICQ	July 2
VK2FMGM	July 12	VK2EM	July 9
VK2FMGM	July 19	VKZHE	July 16
VK2FMGM	July 26	VK2ICQ	July 23
		VK2ZHE	July 31

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and June. While we are optimistic, the meetings scheduled for July and August 2020 that are shown as “Pending” but will be cancelled if the COVID-19 restrictions are still in force.

ORARC Committee Meetings

While face to face ORARC Committee Meetings and Monthly General Meetings are unable to be held due to the COVID-19 infection control restrictions, the Committee is holding virtual Committee Meetings by email on the scheduled meeting dates. By this means, club affairs are still being attended to in order to provide continuity of club business. Individual members of the Committee and sub committees are continuing to undertake the many tasks required in order to meet the club’s obligations as an incorporated not for profit organization. The new VK2RCN repeater site project is being actively worked on.

The minutes of each virtual Committee meeting are being emailed to members after each meeting in order to keep members abreast of club affairs.

ORARC 2020 Field Day

As mentioned above, it is with sadness that the ORARC 2020 45th annual Field Day planned for Saturday the 6th and Sunday the 7th of June during the Queen’s Birthday Weekend has been cancelled due to the COVID-19 pandemic infection control restrictions which are currently in force. The Field Day dinner planned for Saturday the 6th of June 2020 is also cancelled.

The good news is that the next Field Day will be the ORARC 2021 45th annual Field Day to be held in the Wauchope Showground Hall on Saturday the 12th and Sunday the 13th of June during the 2021 Queen’s Birthday Weekend. The Field Day dinner will be held in the

Function Room at the Port Macquarie Golf Club on Saturday the 12th of June 2021.

ORARC had already paid for the hire of the Wauchope Showground Hall and the Port Macquarie Golf Club Function Room. Both the Wauchope Show Society and the Port Macquarie Golf Club kindly accepted the cancellation of the paid bookings that we had made for the 2020 Field Day and graciously transferred our payments to the bookings made for next year’s 2021 Field Day. This means that the 2021 Field Day bookings have been confirmed and paid for.

We must especially thank Gary Ryan VK2ZKT of Radio Supply Pty Ltd of Bellingen for agreeing to transfer his sponsorship of the Port Macquarie Golf Club Function Room hire for the Field Day Dinner to the 2021 Field Day. He had already paid for the hire of the room for this year’s Field Day Dinner so it was very kind of him to agree to sponsor the hire of the room for next year’s Field Day, and to agree to transfer his payment to next year’s room hire. Thank you, Gary. Gary has been a long-time supporter of the Oxley Region Amateur Radio Club. His company, Radio Supply, has exhibited at every ORARC Field Day for a great many years, and has always been very generous in his sponsorship.

2021 marks the 50th anniversary of the formation of the Oxley Region Amateur Radio Club so the 2021 Field Day will be a good time to celebrate both the Field Day and the 50th anniversary. We should do something special for the Field Day Dinner.

Foundation Licence weekend and Assessments 14 & 15 March 2020

While the evolving COVID-19 pandemic was already a consideration and risk management to avoid possible infection transmission was implemented, on Saturday and Sunday the 14th and 15th of March 2020 the club conducted a Foundation Licence Training weekend with

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assessments on Sunday the 15th of March 2020.

The above assessment weekend just beat the closedown of processing Amateur assessments and licence applications by the Australian Maritime College in response to the rapidly evolving COVID-19 restrictions.

Congratulations to Leo Mason-Hubers VK2FLUX, Jacob Deline VK2FWTF and Murray Smith VK2FLAT who have already received their callsigns, and to Allan Mamo who is still awaiting his callsign.

It is planned to run another training and assessment weekend as soon as the COVID-19 social isolation restrictions are eased sufficiently to allow face to face contact. Candidates who were unable to attend the 14 and 15 March weekend, and others who would like to obtain their Foundation Licence or upgrade, please contact Education Officer Larry Lindsay VK2CLL. This will help Larry to plan the next Assessment weekend. Once you have registered your interest, Larry will contact you as soon as it becomes possible to run another training and assessment weekend.

John Moyle Memorial Field Day 21 & 22 March 2020

The John Moyle Memorial Field Day began at noon on Saturday the 21st of March 2020 and ended at noon on Sunday the 22nd of March 2020.

As reported in March 2020 "Oxtales", the planned ORARC participation had to be cancelled. It had been planned to set up the club's Communications Caravan in the camping area at the Camden Haven Airfield but there was a repeat of the heavy rain that caused the cancellation of last year's participation. The ground was still soft and wet after the rain in the weeks leading up to this year's event but that was overtaken by the rapidly evolving social restrictions that were coming into play as the spread of the Corona COVID-19 infections took hold.

Sadly, there was no alternative so we had to cancel again.

Hopefully, the COVID-19 pandemic will be only a memory and we will have more luck with the weather for next year's John Moyle Memorial Field Day.

ARNSW Balun Building and Testing Day

A Balun construction and testing day at the SES Building in Port Macquarie had been planned for Sunday the 24th of May 2020 to coincide with the Balun Buildathon planned to be held at ARNSW at Dural on the same day. The balun construction day is an Amateur Radio NSW initiative to promote hands on construction by Amateurs. There was an excellent response to the call for interest and many members have already ordered and paid for their balun kits and Kevlar antenna wire. The order book is now closed.

Unfortunately, the balun building and testing day has had to be postponed indefinitely due to the COVID-19 restrictions.

The good news is that ARNSW have agreed to supply the ordered balun kits and Kevlar wire to ORARC for distribution to our members so that they can build the baluns at home. Of course ORARC will be pleased to assist with any problems that may be encountered during home construction. The balun kits and wire have been ordered from the supplier and will be distributed as soon as they arrive in Port Macquarie.

Members will recall that there was a choice of constructing a 1:1 or 4:1 balun or a 9:1 unun. The kits offered for the buildathon are all subsidised by ARNSW as a service to Amateur Radio at \$20 each. Similarly, the cost of the Kevlar antenna wire has been heavily subsidized by ARNSW in order to supply it at 50 cents per metre. ORARC is very pleased that the offer to

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participate was offered to our club. Thank you to ARNSW. Many ORARC members are also members of ARNSW. Those who are not already ARNSW members are encouraged to consider joining. Please see the ARNSW web site <https://arnsw.org.au/>. The membership page is at https://arnsw.org.au/html/page_membership.htm

Please see pages 6 and 7 of the March 2020 issue of Oxtales for more information on the balun kits and Kevlar antenna wire.

Special thanks to Al Hirschel from ARNSW for arranging for ORARC members to participate in the Buildathon. Thank you to ARNSW for supplying the kits and Kevlar wire at a subsidized low price as a service to Amateur Radio.

Telegraph Point VK2RCN Repeater Site

The VK2RCN Telegraph Point repeaters at the existing site are all working well, with the exception of the 53.8 MHz 6 metre repeater which is off air. A replacement 6 metre repeater will be installed at the site soon.

ORARC is working towards building an entirely new repeater site on the same ridge line as the existing VK2RCN site. Much work is being carried out to secure a lease on the selected site so that a Development Application can be submitted.

Some funds are already on hand from the fund raising that has been carried out. The club is indebted to Paul Jones VK2DEL for securing some significant donations. The ORARC applied for a grant under the 2019 Community Building Partnership. We are delighted to have received partial funding of our application to the amount of \$23,361.00. The grant will enable the equipment building and footings for the mast to be built once the lease is in place and the Development Application is approved. Funds will have to be raised to cover the cost of connecting electrical

power to the site and erecting the mast and antennas.

Thank you to the individual members who are undertaking the many tasks required in order to make the project viable. Please contact Henry Lundell VK2ZHE if you are able to assist. Fortunately the current tasks are able to be worked on by individual members during the COVID-19 restrictions. There is a lot to be done in order to achieve this project. Once the Development Application is approved and site works can start there will be many calls for volunteer labour and assistance. By then the COVID-19 restrictions are expected to have been lifted.

Urunga Convention



The 71st annual Urunga Radio Convention was cancelled due to the COVID-19 restrictions. This is the first time that a convention has had to be cancelled. The 2020 Urunga Convention would have taken place at Urunga over the Easter Weekend on Saturday the 11th and Sunday 12th of April 2020 at the Senior Citizens' Hall in Bowra Street. The next convention will be in the same location on Saturday the 3rd and Sunday the 4th of April 2021 during the 2021 Easter Weekend.

WICEN (NSW) Mid North Coast Group

The WICEN (NSW) Mid North Coast Region group is unable to hold monthly face to face meetings at the moment due to the COVID-19 restrictions. When ORARC face to face meetings are able to resume, the WICEN Mid North Coast Group will again hold a meeting at the conclusion of the ORARC

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Monthly General Meeting on the first Saturday of each month.

The WICEN (NSW) Mid North Coast Region group conducts a net on the WICEN 80 metre frequency of 3600 kHz LSB at 7 pm local time on Thursday nights. The nets finish in time for members to participate in the ORARC Thursday night net at 7:30 pm on the VK2RPM 146.7 MHz 2 metre repeater.

WICEN and other amateurs are experimenting using the FreeDV digital voice mode on HF. Several WICEN Mid North Coast Group members have ordered the SM1000 stand-alone adaptor which enables any SSB transceiver to transmit and receive in the FreeDV digital voice mode. For more details on the SM1000 see http://www.rowetel.com/wordpress/?page_id=3902 For more information on FreeDV see the excellent YouTube video FreeDV Presentation at Gippstech 2015 by David Rowe VK5DGR <https://www.youtube.com/watch?v=nAJ9s2Di084> Note that you can run FreeDV digital Voice using a PC. See the FreeDV website <https://freedv.org/> for full details.

Bob Ecclestone VK2ZRE will be pleased to provide more information on the SM1000 and FreeDV.

More information on WICEN may be found on the WICEN (NSW) website <http://www.nsw.wicen.org.au>



VK2BOR Club Station

If the COVID-19 restrictions are eased sufficiently to permit operation from the club's Communications Caravan, the club station VK2BOR will participate in the following events in the next few months. Mark your calendar now:



The Remembrance Day Contest which takes place on the weekend of Saturday and Sunday the 15th and 16th of August 2020. If the COVID-19 restrictions preclude operating VK2BOR from the club's Communications Caravan, members will still be able to participate in the RD contest from their home stations.



The 22nd annual International Lighthouse and Lightship Weekend which takes place on the weekend of Saturday and Sunday the 22nd and 23rd of August 2020.

Note that this year the ILLW has been moved the later weekend in the month out of respect for those commemorating the 75th anniversary of Victory in the Pacific (VP) day on 15th August 2020 during the RD Contest. The ILLW will go ahead regardless of COVID-19 restrictions which may be in place. However, VK2BOR will only operate in the ILLW from the club's Communications Caravan to be located at the Tacking Point Lighthouse if restrictions permit.

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The Scouts and Guides 63rd annual Jamboree on the Air (JOTA) which takes place on Saturday and Sunday the 17th and 18th of October 2020. As usual, the VK2BOR JOTA station at McInherney Park in Port Macquarie will again be part of a District Event so ORARC will only run one JOTA station on Saturday the 17th of October 2020. It is hoped that the COVID-19 restrictions will be eased sufficiently for JOTA to proceed but planning is already in progress on that assumption.

Congratulations to 1st Port Macquarie Sea Scouts on their success in obtaining a grant under the 2019 Community Building Partnership to enable them to rebuild their boatshed at McInherney Park.

There will be more details regarding the RD Contest and the Lighthouse weekend in the July issue of Oxtales.

Life Membership

ORARC members are reminded that they are eligible for Life Membership at 85. Any members turning 85 please let the Committee know as Life Membership proposals must go before ORARC AGMs which are held in August each year.

Henry Lundell VK2ZHE
President

Membership Fees

Dear fellow ORARC members,

This is a reminder that annual subscriptions are now due for renewal.

The easiest way to pay subs, for members with computer access, is by direct deposit into the Club's account with the:

Regional Australian Bank
BSB: 932-000
Account Number: 500032744

The Original HCCU BSB and A/c number is still valid but will be phased out probably in the next 6 – 12 Months so please update as soon as you can

Don't forget to reference your call sign or name to identify your payment.

Alternatively, you can pay by a cheque (please add 50 cents to cover Bank cheque fee) made out to Oxley Region Amateur Radio Club and post it to PO Box 712 Port Macquarie 2444.

Finally, if you attend the monthly meeting on July 7*, you can pay then.

Fees remain the same as last year: \$40 for ordinary membership, \$20 for Associate Membership, \$10 for distant membership and the family membership concession still applies.

*Assuming we are able to meet as per normal

Thank you

Dennis VK2DAM

Treasurer

Now for a little light relief provided by Henry VK2ZHE.



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Construction Project 1

The following was submitted by John VK2KC and could be easily assembled in an afternoon and be a practical measuring tool for those members conducting antenna experiments.

Simple Field Strength Meter by Gary Skett VE7AS

'A field strength meter is an instrument that measures the electric field strength emanating from a transmitter. A field strength meter is actually a simple receiver. After a tuner circuit, the signal is detected and fed to a micro-ammeter or, in this circuit, a digital voltmeter (DVM).'

A field strength meter (FS) in its heyday, was used to measure the transmitted signal strength of any antenna - from a distance usually of 1, 3, or up to 30 metres. As long as the meter was "calibrated", one could set up the antenna, mount a FS meter X number of feet or metres away, pump 1, 5, 10 or 100 watts out of it and measure the "strength" of the RF field at that measured distance. It was simple, you could tune for maximum meter deflection, which usually meant your SWR was at its lowest. An OK tool if you didn't have a sophisticated watt meter or new-fangled SWR bridge!

Today, it can be used by the antenna experimenter to measure the gain of the antenna - in RF volts or Db or whatever scale you had labeled on your meter, even S-units. A sensitive FS meter can pick up low power bugs, or any source of RF energy. More useful if you spent big dollars and put a tuned circuit, attenuators or a pre-amp in the circuit, and of course lots of LEDs.

But of course, good RF meters are expensive and somewhat hard to find, not many at the swap meets these days... and they are usually combined with other types of measuring devices, watt or SWR meters, thus often more money than the typical

cheap operator wants to dish out.

Solution, make your own!! A simple FS meter is the simplest thing to make and is good enough to see if the antenna under test is radiating more power than your old ground plane, old mobile vertical or just radiating at all in a particular direction or in all directions.

Here is what you need:

A digital voltmeter with a DC millivolt scale - every shack probably has a few just hanging around.

- 1 A Germanium diode, just about any type, as long as it's Germanium, like an OA91, 1N34, 1N270, 1N914 or 1N100.
- 2 A 3.3M Ω 1% resistor, 1/8 or 1/4 watt.
- 3 A 100 picofarad capacitor.
- 4 And a hand-made inductor [L₁] of 7 turns on a 1/4 inch coil form with a ferrite slug 24 to 28 AWG lacquered wire experiment with number of turns etc depending upon band.

Some miscellaneous parts like an antenna or antenna connection, a tiny box to put it all in, and some jacks that your DVM leads will insert into.

Using a digital meter, as opposed to an analogue meter has a few advantages in this circuit.

First, the impedance of a DVM is very high, around 10M Ω per volt on most meters. This will not shunt or load down the tank circuit.

Second, compared to an analogue meter, very slight differences in signal strength can be more easily observed.

Third, a digital meter will have better linearity responding well to both weak and stronger signals.

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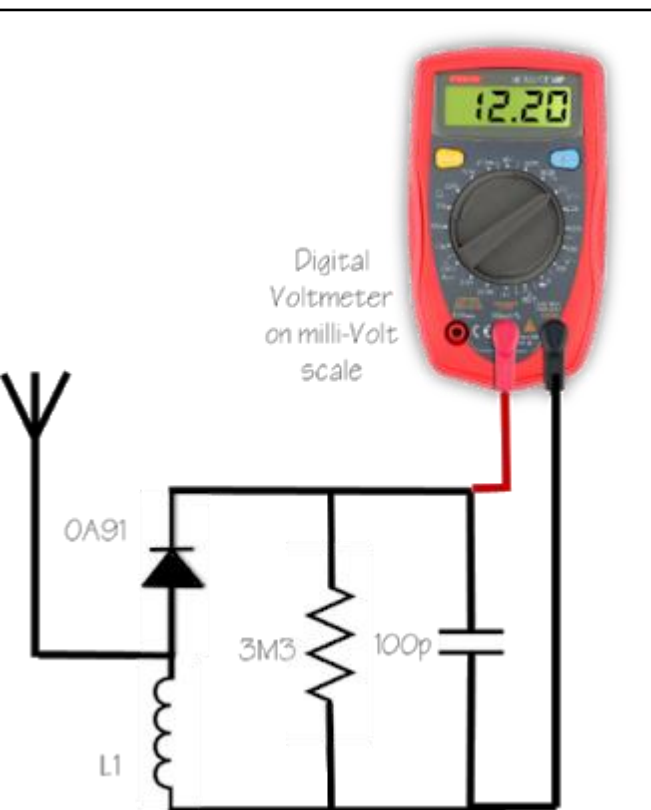
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All you want to see is the numbers, the higher the number, the more signal strength.

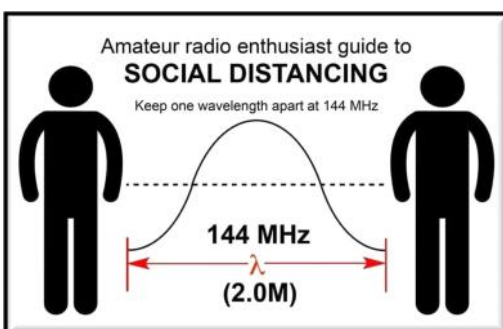
Just remember a few basic rules.

Keep the distance and power out the same for all your experiments, and turn off all your APRS trackers and digipeaters as they will want to add their 2-cents worth to your measurements.

If you have it in a hand-held configuration, you can “see” lobes, minimum and maximum RF fields as you walk around your test antenna. Oh, and then put a set of crystal ear plugs in place of your DVM and you might just hear the nearest AM broadcast station. Enjoy!



The original article appeared in the Communicator - Summer 2011 edition



Dave's Linear Bench Power Supply

By Dave VK2ZL3DS



I have spent about a year of spare time developing my own linear bench power supply to meet my needs. Specifications are:

- 1 Takes up only about 100mm of bench space. Finished overall dims are: 100 w x 260 h x 325 d. Governed by available bench space, sizes of 10-fin heat sink, available transformer, fan and meters.
- 2 25V 5A nominal. (2.5A up to 3V, 3A up to 12V, 4.5A up to 16V then 5A to 25V). (This could be improved with a bigger transformer with centre-tapped secondary).
- 3 Current limit down to < 4mA. I limit at low currents may be set fairly accurately with the 10-turn pot and DMM.
- 4 Power is available at output terminals secs after mains comes on. Voltage and current controls are both 10-turn ww pots.
- 5 Fan speed ramps up with heatsink temperature rise.

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- 6 Fast FR607 diodes give regulator and reverse polarity protection.
- 7 12A fuse in output protects against a battery under charge being accidentally connected wrong way around.
- 8 If mains power fails, output terminals are immediately isolated.
- 9 LEDs indicate supply is Ready, Current Limiting, Overtemp and Fan operation.
- 10 Overtemp instantly isolates output terminals and flashing LED accompanies loud spoken warning requesting operator to reduce load and press Reset button. (Greeting Card recording module).
- 11 No RFI problem and good regulation.
- 12 Very good quality fans give quiet operation.
- 13 Separate PCBs are used for the different sections so changes can easily be made or a faulty board bi-passed in some cases.
- 14 Note the green USB stick tucked under the output terminals. It contains PDFs of all tech. information and circuit diagrams.
- 15 I will make a cover for it when I can get access to a bender!

David Brewster ZL3DS

Inside the case:



Trivia 92 Comms

By David VK2AYD 12/04/20

A "AYD" rambling to off-set the solitude imposed by a Virus and Yes, this is the 92nd Trivia I've written. When will it stop?

Whilst putting together a brief on the history of communications I ran into some new words that were not regular to my vocabulary and wondered if I had miss-spent my youth and early English lessons. Perhaps they are familiar to you.

The research took me back 500,000 years BCE, to the origin of speech, long before the cell phone was developed. As this was the ice age I imagined the carvings would eventually melt!

Then I discovered my first new word. "Petroglyphs". Even my computer coughed when I typed it. It refers to carving into rocks and referenced the era of Neolithic and Paleolithic times dating back some 12,000 years. (I wondered how they called "CQ").



Next came the "Pictogram". Now that was something I could relate to. I love looking at pictures! They tell the story and leave it to your imagination to interpret them. Getting closer to my childhood at just 5,000 BCE. Wikipedia says they were the basis of "Cuneform" and the beginning of "Logographics". No translations on these. Still no mention of the cell phone!



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The next one threw me. “Ideograms”. Now we are getting to me as I fall in this category of idiots. And so came “Writing” and “Script” and the alphabet, but nothing about the art of contest logging. No mention of the poor birds that lost their tails to create the quill pen and I still haven’t found out who developed the first pencil!

In the end I concluded that story telling was perhaps the early means of passing on a message. Of course these were followed by smoke signals and flashing mirrors. I noticed there was no mention of the two empty cans and a length of string.

About 150 years ago the age of combustion, electricity was born. You know all about this. Wow. We live in a wonderful era of evolution. My chapter on the use of code (like the one Morse expounded) is just as exciting and here we are in the digital age of 1 and 2 or + and -, I wonder who Binary was ?

de VK2AYD

Editor’s note: David has assured me that until all lockdown restrictions are lifted there will be plenty more of the ‘Trivia Comms’ in the future.

The following article has come from the March edition of the Westlakes Magazine. Bob VK2ZRE then added to the article with a personal anecdote which provides a real human interest to the story. The original article and Bob’s letter is reproduced below.



Few people are aware of how black widow (redback) spiders contributed to the World War II effort, but they had a significant impact. A LIFE Magazine article published on August 30th of 1943 credited each of several

government employed arachnids with spinning between 100 and 180 feet of thread a week. This thread was then used to make crosshairs in the gunsights of U.S. Army instruments of war. This is not the first time spider thread was employed for this purpose. Before World War II began, different species of garden spiders had threaded various precision optical devices throughout the United States. However, with the arrival of war, the black widow was used out of necessity to supplement a dwindling supply of material.

Ironically, workers at the U.S Army Quartermaster Corps spider web production shop, where thread was collected, found black widows much easier to use than the other less poisonous but faster-moving garden varieties. The Quartermaster Corps was in charge of all aspects of thread collection, including spider gathering. They did this on base at Fort Knox, Kentucky, where soldiers famously encountered high populations of black widows during outdoor training. After on-base collection, the specimens were sent to Columbus, Ohio, where they were housed in glass jars, fed two flies each week, and began systematically producing thread. Thread production was a hands-on and time consuming process. It was done every two days, after the careful removal of a black widow from its glass jar. The spider was then gently placed upon a wire coat hanger that was bent to form a spindle-type structure. As the spider dangled from the hanger, continually spinning its thread, the hanger was rotated to steadily collect the growing strands. Following collection, the web material was unwound. The free-floating end was covered with a piece of plasticine to assist with the unwinding process. Then, pieces of the thread were cleaned of dust and debris with a brush coated in acetone. Finally, the web segments were strung upon a diaphragm and fitted to a surveyor’s transit. The army went to such efforts because of the unique qualities of spider silk that made it superior to other more easily supplied substances. A spider’s spinnerets produce thread as

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thin as one fifth the diameter of human hair, yet it is almost unbreakable. Platinum or steel wire made of similar thickness is much less durable. Spider thread is not only strong, but also elastic, and stretches tightly in the strong, straight line necessary for crosshairs. In addition to this, it is uniform in diameter and can withstand extreme temperatures better than other known materials.

Unfortunately, in addition to being a painstaking process for human workers, thread production of this magnitude had an even greater toll upon the spiders themselves. In a few months, they each produced more thread through this collection method than they would normally produce throughout their lives. Because of this, their usual year-long lifespan was reduced to a mere four months. Spider web was used as far back as ancient Greece as a suturing thread to hold wounds shut. The Australians fashioned it into fishing line and the New Guineans manipulated it into nets. The dexterity and strength of the substance has been known throughout the world for thousands of years. During both world wars, the U.S. government relied upon the help of its private citizens to supply sufficient quantities of silk for its war-time devices. From Life Magazine – 1943

Bob VK2ZRE's letter follows:

I have just been reading the March 2020 edition of the Westlakes magazine and really enjoyed the article on spider web gathering. When I was a young lad back in the early 1950's, my father told me that he used to gather spider web for an instrument maker in Melbourne between the two World Wars. The web was used for the cross hairs in survey equipment. I can't be certain, but I seem to remember he used St Andrews Cross spider web. He gathered it manually on a wooden frame much like kite or HF antenna winders. As mentioned in your Life Magazine article, he would carefully place the spider on the frame and then start turning it as the spider dropped away. I believe he delivered the web to the factory still on

the frame. He would then collect empty frames from the factory and head out again the next day to harass more unsuspecting spiders. He told me the same thing about the strength of spider web, it is much stronger and more durable than any man made alternative. I have never forgotten that little gem. I certainly had opportunity to "test" some web from some large bird-eating spiders when I was working on a communications project in New Guinea in the early 1970's. Thanks for a great magazine, I really enjoy reading it. Well done. 73...Bob Ecclestone VK2ZRE (Oxley Region ARC).

Editors' note: If any member has a story to share that they think would be of interest to others, we would be very happy to hear them.

Passive Inter Modulation

Part 2:

A Case of Poor TV Reception Rectified

By Bob VK2ZRE

PIM, or Passive Inter Modulation, was covered in some detail in Part 1 of these articles published in the March 2020 edition of Oxtales.

For those who missed that article, here is a brief recap of the mechanism of PIM.

PIM most often occurs when an unintentional non-linear junction is irradiated by a strong RF field. The RF causes this junction to fully or partially conduct and any other RF signals in the area, such as TV signals, broadcast radio, amateur radio or other RF signals are caused to mix to create "intermodulation products" that interfere with one or more of the "victim" services. The interference can be constant or "triggered" by some other event or signal which causes the interfering signal to be produced.

These junctions are often created by corroded joints on antennae, towers, masts or cable connectors.

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These junctions do not have to be part of the “strong” RF field structure, they only have to be within the strong RF field and close enough to the receiving antenna for it to pick up the rogue mixing product on the frequency of interest.

From an Amateur radio point of view, the first we usually hear of the effects of PIM is when a neighbour, or our long suffering partner, complains that their TV reception goes haywire whenever we hit the Press-To-Talk switch.

It is perhaps a little ironic that this article was actually supposed to be the article that became Part 1. This article was to be the only one, but the more I wrote about PIM, the more I figured many readers do not know a lot about it. If we are really lucky, we have never been affected by it, or don't realise we are affected. But sometimes it affects us and we are unaware of the cause. Hence the reference in Part 1 to the ORARC VK2RPM 2-metre repeater located on the Middle Brother RF site and so it was with the TV antenna installation at my home in Kempsey, NSW.

I live in a Land Lease Community, a caravan park where we own our physical house and rent the land; I am constrained by what I can do regarding antenna installations on my site. HF antennae are a particular issue. I do not currently have a home station set up, so this story is not about problems with my amateur radio installation or related activities.

But let's start at the beginning. My wife and I became Grey Nomads when we sold our home of 25 years in Canberra and hit the road in our converted coach motorhome in 2002. After 13 years travelling Australia, we had to give up this lifestyle due to my wife's eye condition which meant she could not drive any more. We decided to settle down and eventually purchased an older on-site van in a caravan park in Kempsey. After significant renovations, we finally moved into our “new” home in December 2015. One of the highest priorities now was

to get a new TV set and good TV reception.

The first thing was to determine where the antenna should be pointed and whether it should be a VHF, UHF or VHF/UHF antenna. As our caravan park is at least 50 years old, some cabins had a VHF antenna pointed to Middle Brother south of Port Macquarie, a majority had a UHF antenna pointed north and the vast majority had satellite TV dishes, many of which by now seemed largely disused. The satellite dishes indicated to me that reception from Middle Brother had not been great and tended to indicate that the UHF service to the north was relatively recent.

As a matter of interest, one of my neighbours had a VHF antenna pointed at Middle Brother, but he often complained that reception was pretty poor. What was more interesting was that he noted reception was getting slightly better over the period the new Pacific Highway was being built between Kempsey and Port Macquarie. It turns out that when the cutting on Mt Cooperabung was completed, his reception was much improved.

Turns out Mt Cooperabung was the main reason many people in Kempsey went on to the UHF service after the introduction of digital TV on Middle Brother. It was much easier to put up with a bit of “snow” in the old days of analogue TV than the RF “cliff” of digital TV. I suggested to him that he should consider getting a professional TV antenna installer in to fit a UHF antenna instead. He did, and his variable TV reception problems were fixed.

My initial thought after asking several people, including my neighbour's antenna installer, was that the UHF service came from Mt Yarrahapinni, NW of Stuarts Point. But a search of the ACMA database did not show any TV service on Mt Yarrahapinni. Turns out our northern UHF service originates from Mt Moombil, west of Coffs Harbour, some 91Kms away.

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When we bought our cabin in the caravan park, there was already a UHF TV antenna installation in place. This consisted of an 18/32 element UHF Yagi feeding a masthead amplifier mounted on a section of 3/4" (19mm) water pipe.

The antenna was a wide band, high gain antenna and can be seen in Photo 1 below.



Old 18 Element UHF Band 5 Yagi Antenna

The driven element is a 1" (25mm) wide folded dipole, with a corner reflector and 16 dual element directors. The wide dipole and dual director elements lower the antenna Q and so broadens the bandwidth so the antenna effectively covers the whole of the old UHF TV Band 5 frequency range of 582-820MHz. Note that 692-820MHz has now been repurposed for use by mobile phone carriers as a result of the ACMA Digital Dividend.

A 42" 4K LED UHD TV was purchased along with a new masthead amplifier power supply and power inserter (to replace the missing bits) and hey presto, we at last had digital HD TV. Up to this point, we had only had a Standard Definition 21" TV in our motorhome. We certainly noticed the improved definition of HD, especially on the bigger screen.

But every now and then, and definitely during every electrical storm, we suffered from the dreaded "digital dithers", those horrid little blocks of colour and the chirping audio that can make digital TV so frustrating. Switching lights on and off also caused glitches. I grated my teeth each time this occurred, having spent over 15 years in the broadcast TV industry starting with black and white TV in 1969, into analogue colour TV and then into digital TV.

But worst of all, my wife hated it! "Why is it doing that, you're supposed to be the expert!" she would ask, with that exasperated voice that only a long-suffering XYL can muster!

So when our eldest son and his lovely wife came to visit us from Western Australia in June 2016, I saw this as an ideal opportunity to upgrade the TV antenna system. Apart from anything else, I was concerned that my antenna was looking straight into the canopy of a pretty large Callistemon (Bottle Brush) tree about 4 metres away. See Photo 2 below.



The Bottle Brush directly between the Antenna and Mt Moombil

I managed to acquire a second UHF TV antenna identical to the existing unit along with a full 6 meter length of 1" (25mm) water pipe. We stacked the two antennae about a boom length apart on the mast and coupled them through two equal lengths of new RG6 quad coax cable fed into the "outputs" of a 2:1 TV antenna splitter used as a combiner into the masthead amplifier and back to the TV outlet in the house. I made sure to set the unused VHF gain of the King-Ray amplifier to minimum and the UHF gain to almost maximum.

I have an old analogue Tektronix TV Field Strength Meter (FSM) that I had laboriously reprogrammed with the new digital TV channel centre frequencies. As the TV FSM only has a narrow video IF bandwidth of about 250KHz in which to measure the video carrier of the vestigial sideband analogue TV signal, it is near enough to measure the "white noise" characteristic of

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the centre of the digital TV signal. It is certainly more than adequate to do relative field strength comparisons.

We checked the field strength of the existing installation before we started on the upgrade at around 55dBuV (dB microvolts) on the ABC. The other channels were within about 3dB of this. Once the new antenna system was in place, we measured around 65dBuV on the ABC. Since the recommended field strength for digital TV is around 60-70dBuV, I was pretty happy we had nailed it. The stacked antennae would give us extra gain, but more importantly, it gave us extra “capture area”. I hoped this would help minimise any fading and alleviate our intermittent pixilation problems.

Over the years our TV reception seemed to be better, but it was still not great, and we still suffered from the occasional bouts of pixilation. But during the extended dry season leading up to Christmas 2019, things began to get worse, much worse. In fact the problem was getting so bad, that some evenings we just turned the TV off altogether.

The reason severe pixelation is so annoying is that the processing time of the digital TV stream decoder is about 500 milliseconds. Therefore, it takes at least half a second for the decoder to lock up onto a “new” stream. The new stream can either be when we need to recover from an interruption to an existing stream or when we change channel. This is the reason we experience such a “long” delay when we change channel on our digital TV set.

The problem was worst on the ABC, although the other stations also suffered to varying degrees from time to time. I contacted the ABC thinking they may be suffering temperature inversions or rain fade on the network feed to Mt Moombil. They could not see any issues their end, so they suggested I talk to my neighbours. So one evening, just before the news started, the pixilation was awful. I went to see a neigh-

bour who I know also watched ABC news, and guess what, his reception was fine. I ran back home and our reception was still very poor. I finally had to face the fact that the reception problem was at my end. So, what was causing it and what to do about it?

I spent quite a deal of time thinking about the problem, Sometimes perhaps over thinking it. But then in early 2020, the rain started. And it continued, day after day. And then I noticed that when it was raining, the TV reception was good, virtually perfect in fact.

“What was going on?” I wondered. Then I remembered the VK2RPM issues on Middle Brother. Things were fine when it rained. Could it be I was suffering from the dreaded PIM? If so, where was the source of the irradiating RF?

As it turns out, I have the local Super Radio Network 531KHz AM radio station transmitter next door. It runs about 5KW into a pair of phased masts, the closest mast being about 250 metres from my TV antenna. Well, we certainly have a “strong RF field” nearby, so it was worth a try. See Photo 3 below.



The Super Radio Network 531KHz AM Tx Phased Array Antenna Masts

I decided that I had to replace the whole TV antenna array with something new. The Matchmaster 02MM 36 Element UHF Phased Array “Flying Bedstead” seemed to be fairly popular around Kempsey and it has a much reduced number of points for corrosion to set in

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compared to the existing Yagis. So I headed to Cetnaj and bought a new 02MM antenna. The salesman assured me that he sold a lot of these antennae into the area, so I bit the bullet, paid the \$69 and brought it home.

One of the reasons I had not tried investigating the Yagi array before this was that the Yagis were at the top of a 20 foot (6 metre) length of 1" water pipe. The pipe alone is hard enough to handle on my own, let alone with a pair of Yagis at the top of it. My son and I had battled to get the thing up in the first place, so I was not going to be able to get it down and back up by myself.

I decided I would remove the lower Yagi and put the new Matchmaster 02MM in its



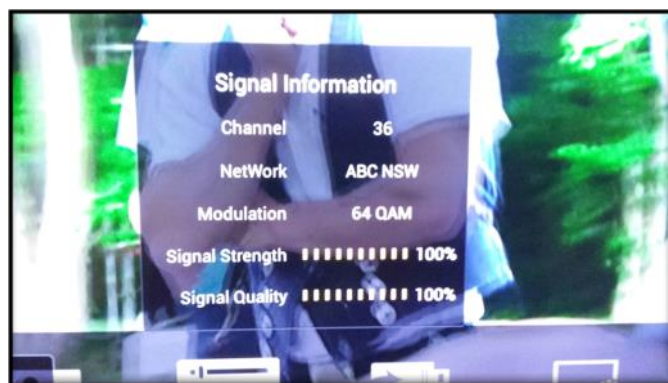
place. This was as high as I could reach with the ladder I had anyway. And to add just a little pressure, I started the job somewhere around 5pm in very overcast conditions which soon deteriorated into light, intermittent rain. The final setup can be seen in Photo 4.

The New Matchmaster 02MM Antenna Mounted Beneath the Old Top Yagi

You can also see one of the 531KHz AM radio station masts in the background "behind" the TV antenna.

Firstly, I tried the antenna by itself without the masthead amplifier thinking that the amp may have also been suffering from RF overload from the dreaded AM station. But the results were very poor. I managed to see

the odd frame occasionally but I was greeted with the "No Signal" box doing its "Pong" impersonation around the screen virtually all the time. (You have to be "more mature" to remember "Pong"). So I re-installed the masthead amplifier and presto, instant images. And they were solid. The Signal Information screen on the TV showed "100% Signal Strength" and, more importantly, "100% Signal Quality". See Photo 5 below.



The Signal Information Screen on the TV after the New Antenna Installation

I checked all channels and all except Prime had "100% Signal Quality". The Prime "Signal Quality" varied from around 95% to 100% but the picture remained solid on the screen, so I was more than happy with the results.

Upon reflection, I remembered that when I finally found this screen on the TV following the initial revamp of the antenna in 2016, whilst the "Signal Strength" was usually a solid 100% on all channels, the "Signal Quality" was often fluctuating between 70% and 90%. So it is obvious from this, that signal quality is far more important than signal strength alone.

As I only decided to write these articles after I was sure that PIM was indeed the cause of our poor TV reception, I only took the photos after the fact, so I don't have any photos of the original TV antenna installation or the 2016 revamp.

But I would like to share some photos of the Yagi I removed from the mast to highlight the corrosion issues which were possible
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bly responsible for the formation of the troublesome “passive junctions” . Points to note are that all elements except the driven element are riveted using steel rivets through the aluminium elements and boom. These rivets appear to be unprotected, although it is possible there was a flash protective coating that has subsequently deteriorated. The driven element has been fastened with aluminium rivets and despite being in a salt-laden atmosphere, there is no sign of corrosion in Photo 9.



Photo 9 above: Aluminium Rivets in Driven Element, Steel Rivets in 1st and 2nd Directors



Photo 6 above: Corrosion around the UHF Yagi Balun “F” Connector



Photo 7 above: The Rust on the Rivets Fastening the First 3 Directors



Photo 8 above: Corrosion, probably Aluminium Chloride at the Last Director Rivet

Therefore, given our general geographical location close to the coast, it would be advisable to use aluminium or 316 stainless steel fasteners on any antenna you may decide to construct.

We will never know if it was one or more of these joints that were the problem or whether the main culprit was on its mate still marooned at the top of the mast. What is clear, is that by removing this Yagi and fitting a new, corrosion free antenna, the extremely annoying intermittent pixelation problem has gone away.

Most importantly for me, a now Happy Wife means a much Happier Life.

Bob Ecclestone VK2ZRE



Coronavirus: How amateur radio is connecting people during lockdown

By Vanessa Pearce BBC News

Amateur radio use in the UK has seen a "significant" rise during the coronavirus lockdown as people seek new ways of staying connected. The national body that represents users - the Radio Society of Great Britain (RSGB) - has said many people who formerly enjoyed the hobby are also returning to it.

Mark Rider's social life before the coronavirus lockdown consisted of the occasional trip to the pub, rehearsing with musician friends and visiting his wife in her care home.

"But when I knew that wasn't going to happen any time soon I decided to dust off my amateur radio equipment to seek out some other social interaction," he says.

Mr Rider, a retired engineer from North Warwickshire, said "ragchewing" - or chatting to people on the airwaves - "has become one of the highlights of my day".

"Because I live on my own, and because of lockdown, I knew I couldn't do what I used to do, which wasn't going to be very good for me or my mental health."

The 67-year-old says keeping in touch with others has been more important since his wife was taken into care after a stroke.

"Just speaking to somebody else in the same situation is very rewarding," he says. The RSGB defines amateur radio as a "technical hobby for people who want to learn about, use and experiment with wireless communications", like Mr Rider, who uses his radio kit to speak to others using designated radio frequencies.

Steve Thomas, RSGB general manager, says the organisation has experienced a threefold increase in the number of people asking to sit licensing exams since social distancing rules came into place. There are currently

about 75,000 licensed users in the UK. "Across the country, clubs and individual radio amateurs are supporting one another by setting up 'nets', or online meetings," Mr Thomas says.

Anne-Marie Rowland has been running twice-weekly meetings to help keep people in contact.

The 11-year-old from Leedstown near Hayle in Cornwall, who has held a licence for about a year, set up the transmissions with the Cornish Amateur Radio Club to help keep people in contact during lockdown.

"We have some regulars but also some new people join in," she says.

Dad Bill, who also runs a weekly meeting, says "we're always available with the radio on, there are a lot of older people out there self-isolating, so this helps them feel connected".

Amateur radio users have also been showing their support for the NHS by adding "/NHS" as an extension to their call signs and taking part in a "get on the air to care" campaign (#GOTA2C), aimed at supporting the emotional health and wellbeing of the radio communications community.

Paul Devlin, from the NHS Emergency Care Improvement Support Team, launched the campaign in an "unprecedented" partnership with the RSGB, whose National Radio Centre is based at Bletchley Park in Milton Keynes.



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He was responsible for creating the health service's amateur radio station GB1NHS.

"The NHS is the only government level organisation to routinely use amateur radio to help improve the lives of communities globally," he explains.

"We want radio operators to simply get on the air, reach out to fellow enthusiasts and check how they're doing," says the 55-year-old from Lichfield, Staffordshire. "Being such a well-recognised brand, whenever GB1NHS is on the air we have queues of radio operators wanting to engage with our messages."

The RSGB introduced remote invigilation in the middle of April to allow people to take their foundation exam - the entry step to obtaining an amateur radio licence.



The Sipple Family

Pete Sipple, 50, from Leigh-on-Sea, who runs the Essex Ham amateur radio club with his wife Sarah, has been offering online training courses for the exam for some time but says since the coronavirus lockdown he's seen a "massive" surge in demand.

"We've had 1,135 people apply for a course so far this year, and due to the Covid demand, are running two courses a month instead of one," he says.

Mrs Sipple, 46, says she's noticed a rise in transmissions from people who haven't been on air very recently.

"Pete has been getting messages saying, 'I haven't used the radio for six or seven years, can you just help me get back into it?'"

Callum McCormick, a 61-year-old antenna manufacturer, hosts a daily amateur radio welfare "net" for the over-65s from his home in Lapworth, Warwickshire. It has reached hundreds of users, with thousands more watching via his YouTube channel.

"The oldest user who has been in touch is 101-year-old George from Dorchester who just wanted to call and tell us he and his wife Ivy were being looked after by their daughter and were OK."

Mr McCormick says he was able to help one disabled and housebound user "who was down to his last half cup of milk".

"He'd been calling in and over the days I'd clocked he needed help, so I managed to mobilise a response to get some shopping to him and he's now being looked after by the council," Mr McCormick says.

"I wanted to do something for the old boys who were feeling a little bit lost and isolated."



Editors' note: If any of our members have a story to share about using amateur radio to cope with the current Coronavirus situation we would be glad to run it in Oxtales.



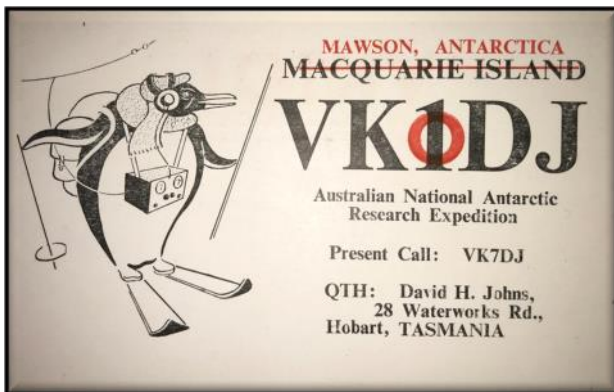
WIA 2021 Annual Conference Dates Announced Date : 09 / 05 / 2020

WIA Annual Conference 2021

Author : WIA Conference Organising Committee

The dates will be April 30th to May 2nd 2021 and as announced earlier the conference will be held in Hobart Tasmania - second time lucky!

The theme remains as "Antarctic Gateway".



This will allow for rebooking of airfares within the 12 month rebooking limit that most airlines have imposed. This also applies to the bookings made on the Spirit of Tasmania ferries.

We are currently revising the format of the conference to bring the technical presentations all into one stream so no-one misses

out on a presentation. This will involve some revision of the when things occur on the Saturday so, watch this space.

Do you have some ideas or would like to see something at the 2021 WIA Annual Conference, then please get in contact with the Organising Committee at email: wia2021conference@gmail.com

More information and the revised booking site will become available soon. (WIA Annual Conference Organising Committee)

AR Magazine March/April



Date : 22 / 04 / 2020

Author : Greg Kelly VK2GPK - WIA President

The new issue of AR magazine has been delayed due to unforeseen circumstances. We hope to have it published soon.

The WIA apologises to members for any inconvenience and appreciates their continued support.

WIA DX Awards Program - New Plaques

Date : 27 / 04 / 2020

Author : Graham Alston VK3GA - WIA Awards Manager

The WIA Awards Committee is pleased to announce the availability of plaques for the following awards:

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DXer of the Year

Elite 5-Band DXCC

DXCC Honour Roll and Excellence

Islands of Australia Honour Roll and Excellence

Grid Square Honour Roll and Excellence

These beautiful plaques, which are unique for each award, are made from crystal and come in various sizes. They can be viewed and purchased by using the Order Plaques section under the "For Members" drop down menu "WIA DX Awards" on the WIA website.



73,
Graham Alston, VK3GA, WIA Awards Manager, on behalf of the Awards Committee.

Joint AMC Remote Exam

Date : 22 / 04 / 2020

Author : Robert Broomhead - VK3DN

Monday night, April 20th was a historical moment for the WIA. The unique significance is that the two WIA members are both WIA Director Elects, Oscar Reys VK3TX and Lee Moyle VK3GK. They conducted Volunteer Examiners Australia Inc's (VEA) first Australian Maritime College, (AMC)

"online" Remote Amateur Radio Exam. Oscar and Lee are both AMC Level 3 assessors and authorized to conduct Remote assessments on behalf of AMC.

Oscar mentioned, "It was an extremely successful remote exam session and the candidate in Perth was ecstatic that he was able to sit his Amateur Radio exam remotely, given the current AMC restrictions imposed on person to person exam sessions. The candidate sat his Foundation licence exam including the Practical and on completion, told us, very excitedly that he was already studying for his Standard Licence Upgrade.....Good job."

"It is moments like these that make it all worth it, it is part of the personal reward for volunteering your time to help others achieve their goals." Lee stated.

WIA congratulates AMC for the introduction of the Online Remote Amateur exam accessibility as the current Covid restrictions having been enforced and restricting many people to be house bound, seemingly rekindling that desire to study and become a Radio Amateur. The ultimate in Social Distancing, now has potential candidates requesting copies if the WIA's Foundation manual like never before, in fact in the last 21 days the WIA has had online orders of around 46 manuals. The result is many exam candidates are queuing up to sit their Amateur Radio Exam remotely as the numbers have been increasing over the last several weeks now. If you need a foundation manual, just jump online and order one from you local club or go to www.wia.org.au and select "WIA Bookshop" under the "For Members" drop down menu.



Equipment from the Past

ICOM IC-718



The ICOM IC-718 is an HF Transceiver that covers the Amateur bands from 160-10 meters. The radio first went into production more than 20 years ago at a retail price of just under \$1,000 Australian. It is interesting to note that the radio's as a 2020 retail price of around \$900. The radio was based on the ICOM IC-78 which was sold at a much higher price as a commercial HF communications radio. Many of the IC-78 saw service in British and Australian Antarctic bases and in various shipping companies around the world.

The ICOM 718 offered ease of operation with one touch band switching, direct frequency input via keypad and auto tuning steps (senses the rate at which the tuning knob is turned). The receiver section features IF Shift, Adjustable Noise Blanker, RIT and formerly optional UT-106 DSP Automatic Notch/Noise Reduction.

Although easy to operate the IC 718 had 99 regular memories and 2 scan edge memories. The transmit section featured up to 100 watts of RF output and AF speech compression to increase average audio output.

A Morse keyer was built-in. The meter shows output power, ALC and VSWR.

The layout and basic operation of the rig was simple however a menu system could be accessed to adjust many operational parameters such as: peak-hold on the meter, mode lock out, RF/SQL knob behavior, key type, etc. The TS function allows you to vary the tuning increment to your liking. The easy-to-read, large LCD and front speaker made this rig ideal for either mobile or base installations. As can be seen in the photograph the rear panel had a minimum number of outputs and inputs.

The IC-718 has a reputation for being a solid performer and being able to operate at full power for considerable time. The specifications of the 2020 models are very similar to those of the 2000 year models. The radios also had a built in general purpose communications receiver.

The later versions of the radio had provision for DSP and had newly designed PLL circuits to improve signal to noise ratios. The combination of the 4-element system mixer and new PLL circuit allows superior basic performance as that of a commercial grade transceiver.

Specifications:

Frequency Range

Rx 0.03-29.999999 MHz

Tx 160—10 Meters Amateur Bands

Modes USB, LSB, CW, RTTY (FSK), AM

No. of memory channels

101 (99 regular, 2 scan edges)

Frequency resolution 1 Hz

Frequency stability

Less than ± 200 Hz from 1 minute to 60 minutes after power on.

Power supply requirement 13.8 V DC $\pm 15\%$ (negative ground)

Dimensions 240mm (W) x 95mm (H) x 239mm (D); Weight 3.8 kg;

Output power

SSB, CW, RTTY 2–100 Watts

AM 2–35 Watts

Blast from the Past

'Blast from the Past' is the section of Oxtales where we reflect on what the club was doing in years gone by. This month's 'Blast' is taken from the 2015 May edition of Oxtales.

In May 2015, Lyle VK2SMI was President, Charles VK2KCE (SK) was Vice President, Secretary Larry VK2CLL and David VK2FRAB Treasurer. The club had 72 financial members.

The main activities reported in that month's Oxtales were on the club's participation at the ANZAC day activities at Wauchope, The John Moyle Memorial Field Day, and Urunga Radio Convention.

The following is from Lyle VK2SMI's president report,

'ANZAC Day this year was the 100th anniversary of the landing at Gallipoli and ORARC set up the Club's Communications Caravan at the Wauchope RSL Club.'

I arrived with the caravan in tow at 5am to secure a suitable parking spot, and after attending the Dawn Service, the van was set-up with the on-board vertical antenna, generator and several WWII vintage radios supplied by Arthur VK2ATM, for display.'



Craig VK2ZCM proudly wearing his father's sparkling medals.



David VK2FRAB, Lyle VK2SMI, Arthur VK2ATM, Rob VK2CRF and Steve VK2HOO looking at vintage radio equipment. Bendix MN26C radio compass receiver and the Command transmitter and receiver supplied by Arthur VK2ATM.



Henry VK2ZHE in a familiar operating position operating the club's radio station using the special ANZAC call sign AX2BOR



The Club's communications caravan in the Wauchope RSL Clubs carpark prominently displayed.



Dave VK2AIF with an impressive selection of medals. Dave is displaying his own medals on the left and his father's on the right hand side of the blazer.



Craig VK2ZCM receives a fox hunting trophy at the Urunga radio convention.

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John Moyle Memorial Field Day

The following are extracts from the 2015 John Moyle Memorial Field Day log from VK2BOR, the club station of the Oxley Region Amateur Radio Club Inc (ORARC).

'The Oxley Region Amateur Radio Club operated the club station VK2BOR from the club's communications caravan which we set up in the car park at McInherney Park, Port Macquarie NSW. The location was quite favourable for HF as there wasn't too much electrical noise and the park is on the southern bank of the Hastings River.

We used the club's 5 band HF trap vertical antenna mounted on the caravan for the contest. VK2BOR only operated for the first 6 hours of the contest on the Saturday afternoon. We were intending to put up dipole antennas but the continual heavy rain on the Saturday morning while we were setting up, and the even heavier rain during the afternoon convinced us to just erect the trap vertical. We didn't erect VHF and UHF antennas this year as the site was at sea level and the VHF horizon was very limited. It was a good decision in view of the heavy rain. The caravan and its waterproof annexe provided a dry comfortable area from which to operate, and to stand down.



Richard VK2CHC and Mark VK2FMGM cook up some sustenance undercover!

HF conditions were better this year than during a couple of previous years' contests. It was good to see 15 and 10 metres open

on the Saturday afternoon.

There were isolated intense local thunderstorms in the afternoon which created very heavy QRN on 40 metres at times so it was good to be able to use 20 metres when this was the case. Unfortunately the QRN and man-made QRM made 80 metres unusable all day. . . .

The caravan proved its worth as without it we would not have been able to set up a self contained portable station under such adverse conditions.



I've attached a few photos which Bob Ecclestone VK2ZRE took on the day. Note the need for the lights to be on inside the caravan at 13:45 in the afternoon! The creature comforts were a real morale booster'



Rob VK2CRF, Craig VK2ZCM and Henry VK2ZHE operating in the dry!.

Silent Key: Timothy Ian Mills VK2ZTM, VK2UJ



Tim passed away suddenly at Beecroft on the 8th of May 2020 aged 81 years. He was born on the 26th of April 1939 in Waverley Hospital, Sydney.

Tim was born to the land to a well-known rural family. In his formative years he grew up on the property Merrigal near Armatree to the North of Gilgandra in the Central West of NSW. He often spoke at length of growing up on the land with resourcefulness and the bounty of good seasons funding adoption of the emerging technology of the post-war era, but also recalled the effects of floods and poor seasons.

Tim's father Charles Dudley (Dud) Mills was an author and poet of note with several published works who after time as drover and stockman in south west Queensland enlisted in the army in 1942 and served 4 years in New Guinea. After the war he moved to the NSW Central West and retired to Mudgee after the property near Armatree that Tim grew up on was sold. In later years Tim spent a lot of time researching his family history and the family properties.

Tim was educated at The Scots College. He began at Bathurst but spent most of his

school years at Bellevue Hill in Sydney.

When Tim left school he joined James Watt Electrical where he had a long career. The company had a major contract with the Grain Board of NSW and Tim spent many years working on silo ventilation systems all over NSW. In Sydney he spent time at many interesting industrial and building sites including the Pyrmont Flour Mill in its later years. His ability to solve complex electrical system problems lead him a second career working on strapping machines and associated equipment prior to finally retiring.

Tim joined the WIA NSW Division in 1958. He was licenced as VK2ZTM as one of the early holders of the still new Limited Licence which had only become available in 1954. In later years he also took out VK2UJ but was always known as VK2ZTM. Tim often remarked on the plush comfortable leather chairs in the main meeting hall of Science House in Gloucester Street in the City of Sydney where the Division met on the fourth Friday of each month the days before the Division purchased its own premises at 14 Atchison Street, Crows Nest.

The WIA NSW Division raised substantial funds by selling Surplus Stores items to members for some years. Members were keen on obtaining a home for VK2WI and the property where ARNSW continues to operate from at 63 Quarry Road, Dural was purchased in 1955 for 300 Pounds. This was followed in 1959 by the purchase of a cottage at 14 Atchison Street at Crows Nest for 7,000 Pounds. The building was converted with a basement for the Surplus Store and the upstairs street level with a meeting hall together with a library and office and a classroom where Cec Bardwell VK2IR conducted personal classes and correspondence course for the Amateur Licence. Cec was the Principal of the Marconi School of Wireless which many Amateurs will remember well.

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The Atchison Street building was opened as the Wireless Institute Centre in March 1962 and the Division meetings transferred there from Science House. Of interest is that for a period of time the neighbours of the Wireless Institute Centre included electronics shops operated by Keith Cunliffe VK2ZZO at 12 Atchison St and by Dick Smith VK2DIK at 10 Atchison St.

At the VK2WI property at 63 Quarry Road, Dural a brick building was erected with a transmitter hall and studio together with an amenities area which included a basic kitchen. It was intended that the building should be built as an H shape but only half of the building was built. Antennas were erected and HF and VHF transmitters and receivers were installed and the still running weekly Sunday broadcasts commenced. Over the years the VK2WI radio facilities were expanded and upgraded a considerable number of times.

After many years of operation from Atchison Street the NSW Division decided to sell it and buy a property at 109 Wigram Street, Parramatta in 1982 in order to be closer to the demographic centre of Sydney. The Division operated from Amateur Radio House at 109 Wigram Street until when another economic decision was taken to sell it and move operations to the VK2WI property at 63 Quarry Road at Dural in 2006. In 2004 a new single, national organisation "The National Wireless Institute of Australia" was formed and the NSW Division became a separate entity as Amateur Radio NSW. Building approval was finally obtained to erect a steel framed building at Dural to provide facilities for meetings and other activities. This was opened as the Centenary Building in 2010 in the year that the Wireless Institute of Australia celebrated the 100th anniversary of its formation in 1910.

Tim was a tireless volunteer who contributed an enormous number of hours in both physical work at the VK2WI site at Dural

and at Wireless Institute Centre at Crows Nest and at Amateur Radio House at Parramatta, well as serving on WIA NSW Divisional Council as President, Secretary and Councillor, and latterly as a Board Member of ARNSW. For many years he attended the WIA Federal Conventions as alternate Federal Councillor for NSW. His continuous service spanned over 7 decades which is unsurpassed. Tim participated in the working bees at Dural in the 1950s and was an active Member of the ARNSW board at the time of his passing in 2020.

Tim was made a Life Member of ARNSW in 2004 in recognition of his continuing outstanding contribution to Amateur Radio. The detail of the NSW Division of the WIA and ARNSW in the preceding paragraphs is included in this Silent Key as Tim was an inseparable part of every aspect of this history from 1958 until his untimely passing.

Tim Mills VK2ZTM is immediately recognised by several generations of Amateur Radio operators. He was committed to documenting Amateur Radio and began with the WIA NSW Bulletin which was created and printed at Atchison Street. He was hands on in all aspects of the legendary "Bulletin folding" throughout the 1960s and the early 1970s until the NSW Bulletin became an insert into Amateur Radio magazine. Those who participated in Bulletin folding will remember the incredible logistics of printing many hundreds of the foolscap sheet bulletins on a Gestetner duplicator, then collating and stapling the sheets before folding them to fit into the envelopes which had to be first pre-addressed to the members. In order to obtain the favourable postal rate the envelopes had to be sorted into postcode groups. All this was done with military precision. When the NSW Bulletin was discontinued in favour of including NSW notes in the printed pages of AR, Tim took on the task of compiling the notes and submitting them by the deadline for inclusion in each issue of the magazine, a task which he was still undertaking at the time of his passing.

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Tim read countless VK2WI morning and evening broadcasts over 50 years and was still on the roster at his passing.

Tim's commitment to the continuing upgrade of the VK2WI site facilities has always been outstanding but for the last 20 years in particular he attended the site almost every day.

Tim's passion for recording and presenting Amateur Radio history resulted in many contributions to published articles and his being asked to deliver lectures on the subject. One such example is the History of Amateur Radio in NSW lecture that he presented to the Manly-Warringah Radio Society on the 25th of March 2016 which is available on YouTube at https://www.youtube.com/watch?v=-T_APMx9vn8

Tim was a long-standing active member of the Oxley Region Amateur Radio Club. In the last 20 years he rarely missed attending the club's annual Field Days. While ARNSW was still running the WIA bookshop he could be relied on to bring a selection of books for purchase at the Field Days. He was a regular attendee at the Christmas Parties. He regularly attended the annual Urunga Conventions, as well as attending various meeting and events closer to Sydney.

Tim is survived by his two sons, Andrew and

Bruce from his marriage to Sue. Andrew and his family live a rural life at Dubbo and Bruce and his family live in Canada.

At the time of printing the funeral arrangements hadn't been finalised but will be announced as soon as they are available. The funeral will be streamed over the internet for those unable to attend in person.

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



Tim VK2ZTM, VK2UJ at the 2014 ORARC Christmas Party.



Tim VK2ZTM, VK2UJ at the 2016 ORARC Field Day.



Tim VK2ZTM, VK2UJ at the 2016 ORARC Christmas Party.



Tim VK2ZTM, VK2UJ at the 2019 ORARC Field Day.

MEMBERSHIP REGISTER

Membership List as at 16, March 2020

No.	Cat	Surname	Given Name	Spouse	Call	Location	Phone
1	O	BAILEY	JOHN	(FLORENCE)	VK2KHB	PORT MACQUARIE	02 6582 2192
2	D	BLACKMORE	MARK	-	VK2XOF	BAULKHAM HILLS	02 9639 0663
3	L	BLYTH	BOB	-	VK2XIQ	TELEGRAPH POINT	-
4	O	BREWSTER	DAVID	-	ZL3DS	LAKE CATHIE	0407 749 748
5	D	BRICE	GRAHAM	(CYNTHIA)	VK2VV	SCONE	02 6545 0411
6	O	BRUCESMITH	SANDY	(KAY)	VK2WH	PORT MACQUARIE	0435 356 466
7	O/F	COLLEDGE	PAUL	(PAULA)	VK2ICQ	PORT MACQUARIE	02 6580 9912
8	O/F	COLLEDGE	PAULA	(PAUL)	VK2FPDC	PORT MACQUARIE	02 6583 8829
9	O	COOPER	GORDON	(GLENDA)	VK2GFC	LAKWOOD	02 6559 6502
10	O	COURT	RICHARD	(LINDA)	VK2CHC	PORT MACQUARIE	02 6581 5658
11	D	DORAHY	ALEX	(ANNE)	VK2HBF	TOORMINA	0400 849 098
12	O	ECCLESTONE	BOB	(DIANA)	VK2ZRE	KEMPSEY	0419 414 412
13	D	EKERT	BRUCE	(YULIA)	VK2EM	FORSTER	0414 532 496
14	O/F	FLETCHER	CAROLINE	(PETER)	VK2CZF	PORT MACQUARIE	02 6584 5191
15	O/F	FLETCHER	PETER	(CAROLINE)	VK2HPF	PORT MACQUARIE	02 6584 5191
16	O	FROGGATT	DARREN	(KRISTY)	VK2MIA	PORT MACQUARIE	0488 01 8102
17	O	FROST	ROBERT	(SUSAN)	VK2CRF	PAPPINBARRA	02 6587 6129
18	D	GARLAND	JOHN	-	VK2CJG	JEWELLS	02 4948 1950
19	O	GILSON	BARRY	(FAY)	VK2LBG	PORT MACQUARIE	02 6583 8814
20	L	GREEN	LEWIS	(PAMELA)	VK2AG	PORT MACQUARIE	02 6584 9162
21	O	HANSEN	JOHN	-	VK2AYQ	PORT MACQUARIE	0427 407 973
22	L	HARDING	DAVID	-	VK2AIF	WAUCHOPE	02 6586 1947
23	D	HARPER	JOHN	(VIVIANE)	VK2LJ	SYDNEY	0417 254 763
24	D	HIRSCHEL	ALLAN	-	VK2OK	DOUBLE BAY	0415 259 777
25	D	HUTCHESON	COLIN	(PAULINE)	VK5DK	MT. GAMBIER	08 8725 5527
26	D	JANES	LES	(BEVERLY)	VK5JL	SALISBURY HEIGHTS	08 8281 3878
27	D	KEIR	ANDREW	(BARBARA)	VK2AAK	DARAWANK	02 6554 3498
28	D	JOHNSON	STEVE	-	VK2SJJ	BELLINGEN	0466 334 626
29	O	JONES	PAUL	(SANDRA)	VK2DEL	PORT MACQUARIE	02 6584 3772
30	O	KOPPEL	HORST	-	VK2FHKO	LAKE CATHIE	02 6585 5992
31	O	KUCERA	PETER	-	VK2MPK	WAUCHOPE	0429 229 290
32	L	LINDSAY	LARRY	(PENNY)	VK2CLL	HUNTINGDON	02 6587 1155
33	O	LINDQUIST	IAN	(BERNADETTE)	VK2IDL	PORT MACQUARIE	0414 419 462
34	L	LUNDELL	HENRY	-	VK2ZHE	PORT MACQUARIE	02 6582 0534
35	D	MACNAUGHTON	JENNY	-	VK2BA	MUDGE	02 6372 4053
36	O	MCDONAGH	JOHN	(KARIN)	VK2VY	PORT MACQUARIE	02 6582 0020
37	O	MARE	HANS	-	VK2MRK	PORT MACQUARIE	02 6582 7080
38	O	MARTIN	CRAIG	(JENNY)	VK2CSM	SANCROX	02 6585 3452
39	D	McADAM	PETER	-	VK2EVB	COFFS HARBOUR	-
40	O	McGUIRE	MARK	-	VK2FMGM	PORT MACQUARIE	02 6583 8875
41	O	McLEAN	JOHN	(CORRINE)	VK2KC	PORT MACQUARIE	02 6584 6220
42	O	MEADE	DENNIS	(SUE)	VK2DAM	PORT MACQUARIE	02 6582 2998
43	D	MEEHAN	TERRY	-	ex-VK2KL	KEMPSEY	-
44	D	MELVILLE	STUART	-	VK2KSM	NORTHERN RIVERS	0419 043 316
45	O	MESSINA	TOBY	-	VK2XTX	PORT MACQUARIE	0417 293 377
46	L	MONCK	ARTHUR	-	VK2ATM	PORT MACQUARIE	02 6581 0960
47	O	MULLINS	RAY	(LYNNE)	VK2JU	PORT MACQUARIE	0432 559 400
48	O	NEIL	JIM	(CAROL)	VK2VIV	PORT MACQUARIE	0487 812 481
49	O	NEWHAM	LAURIE	(ROBIN)	VK2ELN	PORT MACQUARIE	02 6583 5387
50	D	NIVEN	TREVOR	(BETH)	VK5NC	MT. GAMBIER	08 8723 2432
51	D/F	O'BRIEN	GRAHAME	(JUDY)	VK2FA	CARDIFF	02 4954 8688
52	D/F	O'BRIEN	JUDY	(GRAHAME)	VK2HZV	CARDIFF	02 4954 8688
53	D/F	PETTET	JOHANNA	(STEVEN)	VK2FJMM	ILARWILL VIA MACLEAN	02 6645 5290
54	D/F	PETTET	STEVEN	(JOHANNA)	VK2ZVG	ILARWILL VIA MACLEAN	02 6645 5290
55	L	PILLEY	DAVID	-	VK2AYD	KING CREEK	02 6585 2647
56	O	PISANI	VIC	(MEREDITH)	VK2UVP	BONNY HILLS	02 6584 8361
57	D	PRATT	PETER	-	VK2PX	PENNANT HILLS	0418 965 962
58	O	RAE	THOMAS	-	VK2ATR	PORT MACQUARIE	-
59	D	RAY	ROBERT	-	VK2ZWZ	SINGLETON	0412 573 86
60	D	ROMAINE	PAUL	-	VK2UPR	PORT MACQUARIE	0428 466 075
61	O	TERRY	COL	(KATHLEEN)	VK2LCT	YIPPIN CREEK	0429 002906
62	O	SANDERS	BILL	(SUELENE)	VK2FWHP	REDBANK	0437 004 228
63	O	SMALL	ROBERT	(LYNN)	VK2BIG	LAKE CATHIE	02 6584 8148
64	D	SWINDLEY	RON	-	VK2DDQ	KEMPSEY	0417 299 397
65	O	SMITH	LYLE	(JEANNINE)	VK2SMI	WAUCHOPE	02 6585 2497
66	O	SOUTHWELL	IVAN	-	VK2IJS	PORT MACQUARIE	0439 611 452
67	L	THATCHER	TREVOR	-	VK2TT	WAUCHOPE	02 6585 2278
68	D	THOMPSON	DES	(BETTY)	VK9FLHI	LORD HOWE ISLAND	02 6563 2152
69	O	THOMPSON	LARRY	(KATHLEEN)	VK2LJT	TUNCURRY	02 6555 7994
70	O	WALKER	BRUCE	(GWEN)	VK2HOT	PORT MACQUARIE	02 6583 8360
71	D	WALKER	STUART	-	VK2BMX	BEECROFT	02 9869 0515
72	O	WALSH	STUART	(JENNIFER)	VK2FSTU	WAUCHOPE	02 6586 4490
73	O	WARD	MICHAEL	(SEREENA)	VK2FMDW	PORT MACQUARIE	0418 291 276
74	O	WINCHESTER	JOHN	(PAULINE)	VK2NJJ	PORT MACQUARIE	02 6580 3031
75	O	WYNN	STEPHEN	(LYALLE)	VK2ZSW	YIPPIN CREEK	02 6585 3327
76	D	YORSTON	ROBERT	-	VK2CAN	ROSEVILLE	02 9426 3727

Cat Key : A = Associate D = Distant F = Family L = Life O = Ordinary

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