



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

January 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



January 2020

Welcome to 2020. We all spare a thought for those people who have experienced loss and trauma in the continuing widespread bushfires that began early this summer. While we have all been putting up with the seeming endless thick smoke, our club members who volunteer with the Emergency Services have spent countless hours participating in the extraordinary effort to control the fires.

Those who are RFS members have spent a great many hours on extended shifts on the fire grounds. The daily news video coverage gives some idea of the danger in fighting the fires in difficult terrain but can't convey the harshness of the fire environment.

Those who are SES and WICEN members have spent a great deal of time in support of the fire fighters. This includes direct support

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**Down The Coax
Ross Hull Memorial Contest 1 to 31 January
2020**

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

**Monthly General Meeting
Saturday 4 January 2020 2:00 pm**

**Summer VHF-UHF Field Day Saturday 18 &
Sunday 19 January 2020**

**Friday Night Get-Together
Friday 17 January 2020 7.00 pm**

**AX Prefix May be Used on Australia Day
Sunday 26 January 2020**

**Monthly General Meeting
Saturday 1 February 2020 2:00 pm**

**ORARC Antenna Shootout
Sunday 9 February 2020 Start 10.00 am
Tuffins Lane Sports Fields BBQ Lunch**

**Friday Night Get-Together
Friday 21 February 2020 7.00 pm**

**Wyong Field Day Wyong Racecourse
Sunday 23 February 2020**

**Monthly General Meeting
Saturday 7 March 2020 2:00 pm**

**Friday Night Get-Together
Friday 20 March 2020 7.00 pm**

**John Moyle Memorial Field Day Saturday 21
& Sunday 22 March 2020**

**Net Controllers' Roster
Nets on Voice Repeater VK2RPM 146.700 MHz**

**Sundays
(0900 Local)**

**Thursdays
(1930 Local)**

Jan 2020

VK2FMGM	Jan 5	VK2ICQ	Jan 2
VK2FMGM	Jan 12	VK2EM	Jan 9
VK2FMGM	Jan 19	VK2ZHE	Jan 16
VK2FMGM	Jan 26	VKICQ	Jan 23
		VK2EM	Jan 30

Feb 2020

VK2FMGM	Feb 2	VK2ZHE	Feb 6
VK2FMGM	Feb 9	VK2ICQ	Feb 13
VK2FMGM	Feb 16	VK2EM	Feb 20
VK2FMGM	Feb 23	VKZHE	Feb 27

March 2020

VK2FMGM	March 1	VK2ICQ	Mar 5
VK2FMGM	March 8	VK2EM	Mar 12
VK2FMGM	March 15	VKZHE	Mar 19
VK2FMGM	March 22	VK2ICQ	Mar 26
VK2FMGM	March 29		

in the field as well as in communications roles. Both SES and WICEN volunteers have spent time at the various RFS Fire Control Centres in those communications roles. Various Emergency Operations Centres such as the one at Port Macquarie were extremely busy for an extended period as the local fire situation worsened. This scenario has been repeated throughout the country.

Many ORARC members have had first-hand encounters with the bushfires. For example Rob Frost VK2CRF who was out volunteering with RFS was very fortunate that the preparations that he had made to safeguard his property resulted in his house and that of his daughter surviving the fires. Not all of his neighbours were so fortunate as nearby houses were lost. Having the outside of his recently built Amateur Radio shack singed was too close for comfort. Andy Keir VK2AAK and his extended family at Darrawank between Failford and Forster were very fortunate to be able to save their houses as the fire front moved through. The attack by glowing embers well ahead of the main fires has been one of the hallmarks of these fires. Sadly, one of the daughters of Steve Wynn VK2ZSW was not fortunate as her house burnt to the ground. Steve lost all his tools and other items that were stored in her sheds which also burnt.

The fire season is far from over. The RFS Fires Near Me web site <https://www.rfs.nsw.gov.au/fire-information/fires-near-me> provides regular updates of the fires throughout NSW.



ORARC 2020 Field Day 6 & 7 June

The ORARC 2020 Field Day takes place on Saturday the 6th and Sunday the 7th of June during the Queen's Birthday Weekend. It will be the 45th Annual Field Day.

The Field Day venue will be the Wauchope Showground Hall. This venue was very popular last year and the hall was booked again for the 2020 Field Day. The hall is spacious with plenty of off-street parking.

On site camping is available and the Wauchope Showground is pet friendly. Bookings to the live in caretaker on phone 0475 111 074 are essential <http://www.wauchopeshowociety.com.au/camping.html> as the camp sites are very popular during the Queens Birthday Holiday weekend. Rates are very reasonable with power available. There are toilets and hot showers. You can even stable your horse!

The Field Day Dinner will be at 6 pm in the Seaview Room at the Port Macquarie Golf Club. Thank you to Gary Ryan VK2ZKT of Radio Supply for sponsoring the function room for the dinner. There is an extensive menu to suit all tastes. Meals are at club prices.

Planning for the 2020 Field Day has commenced so please consider offering your assistance. The committee will be very pleased to hear from you.

One important project that must be completed prior to the Field Day is the construction and testing of new 2 metre and 80 metre foxes for the mobile foxhunts. Construction of these commenced last year but they were not completed in time. Fortunately, Craig Martin VK2ZCM, now VK2CSM, provided his foxes so the events were able to be run.

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Summer VHF UHF Field Day Saturday 18th and Sunday 19th January 2020

The event runs from 12 noon on Saturday the 18th to 12 noon on Sunday the 19th of January 2019.

This year the club station VK2BOR will not be operating in the Summer VHF UHF Field Day.

Club members are encouraged to participate in the Field Day individually. This can be done using home stations, or perhaps operating portable or mobile. If enough members do this, quite respectable scores can be amassed by working each other. Activity breeds activity so amateurs from surrounding areas will hopefully be tempted to come on air and add to the number of stations that can be worked.

The 6 metre sporadic E season is still active so if the band opens during the Contest some very impressive scores can be made as there are usually a lot of 6 metre stations participating in the Summer VHF UHF Field Day in the southern states, particularly VK3, VK5 and VK7. Sporadic E signals are usually very strong so even a mobile whip will work extremely well. Most contacts will be made on SSB.

The contest rules should be available for download from the WIA website prior to the event at <http://www.wia.org.au/members/contests/vhfuhf/>

Antenna Shootout Day Sunday 9th of February 2020



The club's popular annual Antenna Shootout will be held on Sunday the 9th of February 2020 at the Tuffins Lane sports fields. The large flat open fields make an

ideal VHF and UHF antenna testing range. There is a lot of interest in antenna performance this year with several members already busily constructing new antennas especially for the shootout. This year we expect to see some more 6 metre antennas. The antenna range will again include facilities for this band this year. It is always interesting to see how home brew antennas perform in comparison to the various commercially built antennas.

Facilities will be available to test antennas on 6 metres, 2 metres and 70 centimetres.

As well as the antenna shootout, the day at the Tuffins Lane sports fields is a great social occasion with a bacon and egg breakfast from the barbeque followed by a sausage sizzle lunch.

End-fed HF Antenna "Buildathon" Day Opportunity

After the very popular Amateur Radio NSW initiative to encourage new and some not so new Amateurs to get some hands-on experience in building and testing a 40 metre Dipole Antenna last year, ARNSW is proposing to promote a similar "Buildathon" to construct end-fed HF wire antennas.

The details of the end-fed HF wire antennas have not yet been finalized. If you are interested in building such an antenna, please let Henry Lundell VK2ZHE know. An indication of your interest will be greatly appreciated as it will help to decide if ORARC should participate in this proposed project.

Wyong Field Day Sunday 23rd of February 2020

Many club members will make the annual trip to Wyong racecourse for the Central Coast Field Day on Sunday the 23rd of February 2020.

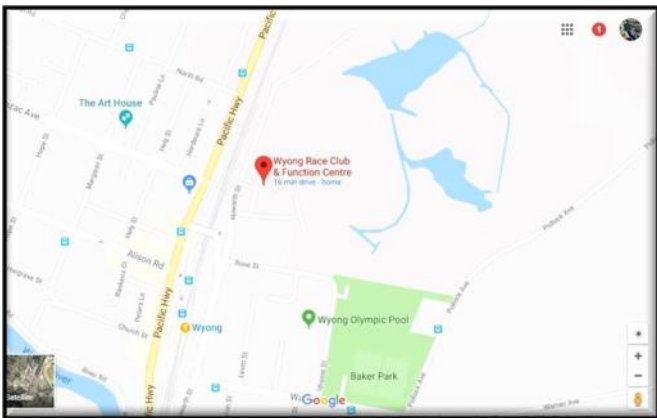
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The Field Day details are at <https://www.ccarc.org.au/wyong-field-day/>

This event is the largest Amateur Radio Field Day in the Southern hemisphere. The Wyong racecourse facilities have been significantly upgraded. The flea market will be under cover and the Traders will be in an air-conditioned environment. This will make for a very enjoyable day regardless of the weather.

There are always lots of bargains at the



Field Day and there is a full range of very interesting seminars during the event. Wear your ORARC polo shirt and cap or hat. Our club is always well represented at Wyong and the club yellow and black stands out in the crowd.

Urunga Convention 11 & 12 April 2020



Remember to mark your calendars for the 71st annual Urunga Convention during Easter on Saturday and Sunday the 11th and 12th of April 2020. <http://users.tpg.com.au/goldy2/index.htm>

Recent Events

Coastal Walk Against Domestic and Family Violence 1 December 2019



The Liberty Coastal Walk Against Domestic and Family Violence, previously known as the White Ribbon Walk, took place on Sunday the 1st of December 2019. Special thanks to those who came out bright and early on the Sunday morning to provide the safety communications. The walk started at the Tacking Point Surf Club and finished in Westport Park. The intermediate check points were at Shelly Beach, Flynn's Beach and at the Town Beach kiosk. The walk passed through the Port Macquarie Town Green on the way to Westport Park.

Those who manned the check points were Rob Frost VK2CRF, Bob Ecclestone VK2ZRE, Dennis Meade VK2DAM, Arthur Monck VK2ATM, Mark McGuire VK2FMGM, John Hansen VK2AYQ, Ivan Southwell VK2IJS, David Pilley VK2AYD and Henry Lundell VK2ZHE. Thank you to John Bailey VK2KHB for being first on site at Westport Park and assisting with the setting up of the Communications Caravan.



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The provision of mains power provided by council was greatly appreciated as it meant that the communications caravan was able to operate without using the club's generator.

The club's Communications Caravan was set up in the carpark at Westport Park to run net control. This year the caravan was located in the park itself which greatly shortened the distance between the caravan and the Finish table in the park itself.

The VK2RPM 146.7 MHz 2 metre repeater was used to communicate between the caravan and the start at Lighthouse Beach. All the other checkpoints had excellent 2 metre FM simplex signals at the caravan which simplified communications once the walk commenced.

This included Shelly Beach where Bob VK2ZRE's IC-706 and VHF/UHF mast mounted vertical antenna conquered the non-line-of-sight path down to the Shelly Beach picnic area.



Bob VK2ZRE's IC-706 and VHF/UHF mast mounted vertical antenna

Shelly Beach station set up. Diana and VK2DAM talking with para-medics.



Below the walkers arrive



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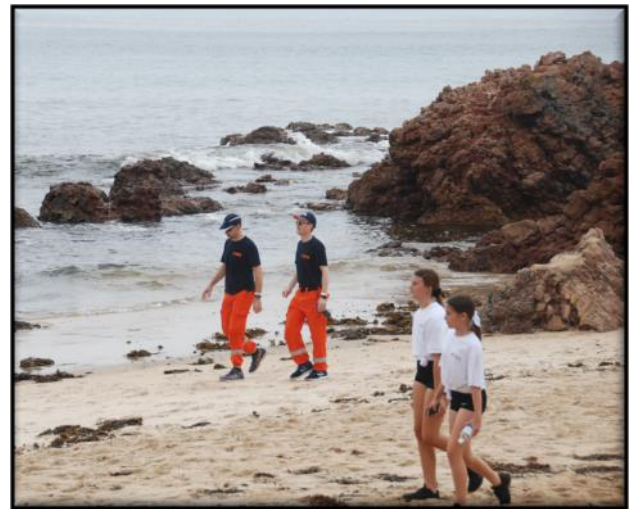
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Above between the beaches; below doing the North Shelly Beach walk.



Walking along Flynn's Beach



SES walks the walk with Michael VK2FMDW



Domestic violence takes many forms

- verbal – shouting, put-downs
- psychological – creating fear, making threats
- emotional – blaming, blackmail
- financial – controlling money, restricting work
- physical – hitting, pushing, choking

Liberty | COASTAL WALK
Specialist Domestic & Family Violence Services



A refreshing spray at Town Beach



The end is in sight!



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The mobile Cappuccino Coffee van and the Port Macquarie Sea Rescue barbeque at the finish did a roaring trade.



Below preparing in the calm before the swarm of hungry walkers.



Communications Caravan Operators included David VK2AYD and John VK2KHB.

Some of the crew



Henry VK2ZHE



Ivan VK2IJS



Ivan VK2IJS, John VK2AYQ, David VK2AYD and Bob VK2CRF

Thank you to everyone who stayed at the finish to pack up the caravan at the end of the day.

ORARC received a very complimentary thank you letter from the event organisers. The club has already been invited to provide the safety communications for the 2020 walk. ORARC is very pleased to have the opportunity to support this most important cause.



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2019 Christmas Party



The extremely enjoyable 2019 Christmas Party was held at the Long Point Vineyard and Art Gallery on Saturday the 7th of December. Thank you to Arthur Monck VK2ATM for booking the Long Point venue and negotiating the free use of the timber deck picnic area and barbeque facilities.



Rosyln was our Long Point Vinyard Host for the day

The weather on the day was absolutely perfect. The day dawned with clear air which provided great respite from persistent heavy bushfire smoke during the weeks leading up to the party. The additional new shade cover above the deck enabled everyone to enjoy the event out of direct sunlight. Almost the entire timber deck picnic area is now under cover so there is full shade and in the unlikely event that it rains in future years everything will remain dry.

Due to the continuing bushfire threat and various family commitments there were many apologies. The smaller than usual attendance still enjoyed a great day.



Ray VK2JU, Larry VK2LL in his new role as waiter, Henry VK2ZHE



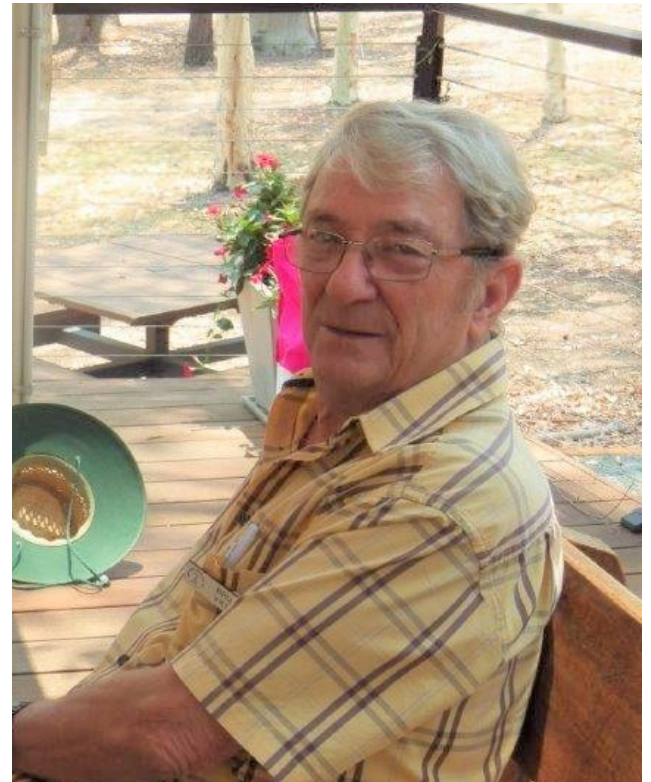
John VK2AYQ with Larry VK2CLL supervising the cooking.

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Ray VK2JU, Sue, Bernadette, Ian VK2IDL, Ron VK2DDQ and Bruce VK2EM await the cooking.



Bruce VK2EM in contemplative mood.



In depth discussions with Dennis VK2DAM, Arthur VK2ATM, David VK2AYD and Diana



Hmm I wonder if I should take just one more of Ian's delicious sausage rolls!

Thank you to everyone who attended the party and contributed to making the day a great success. The sausage sizzle lunch was expertly barbequed by Larry Lindsay VK2CLL and John Hansen VK2AYQ. The delicious trifle dessert made by Sue Meade was a very popular treat to end a very enjoyable lunch. As usual there was a veritable feast of party food brought by members to share. Thank you to Arthur VK2ATM for sharing a whole box of cherries. No one went hungry! The tea and coffee, soft drinks and chilled water ensured that no one remained thirsty.

Those attending included Arthur Monck VK2ATM, Dennis Meade VK2DAM and Sue, John Hansen VK2AYQ, Ian Lindquist VK2IDL and Bernadette, David Pilley VK2AYD and Diana, Larry Lindsay VK2CLL, Ray Mullins VK2JU, Ron Swindley VK2DDQ, Bruce Ekert VK2EM, and Henry Lundell VK2ZHE.

More than 17 apologies were received. Hopefully most of those who had to tender apologies for the 2019 party will be able to attend the 2020 Christmas party.

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The venue has already been booked again for the 2020 Christmas Party on Saturday the 5th of December. Mark your calendars now! The Christmas Party is indeed the social family highlight of the year and should not be missed. The covered timber deck picnic area at the Long Point Vineyard and Art Gallery is a perfect party venue.

Middle Brother Mountain VK2RPM Repeater Site

The radio link site on Middle Brother Mountain at which the VK2RPM repeaters are located has thankfully escaped the ravages of the widespread bushfires so far. The VHF and UHF voice repeaters and the APRS digipeater have continued to perform reliably. We are still awaiting the planned second phase of the link site upgrade works to be carried out by TPG Telecommunications. Broadcast Australia has recently carried out upgrade work on the Television and FM Broadcast transmission tower. Since this work was completed there has been a noticeable reduction in broadband noise desensitisation of the 146.7 MHz 2 metre voice repeater.

Telegraph Point VK2RCN Repeater Site

The VK2RCN site at Telegraph Point was not damaged when the severe bushfire went through the area. The fires burnt all around the site and burnt down numerous electrical power poles which resulted in a 10 day power outage. The voice repeaters ran for 3 days on their back up batteries but after that the short periods of generator power at the property did not recharge the batteries sufficiently to sustain VK2RCN 147.0 MHz and 438.425 MHz. The VK2RCN-1 APRS digipeater continued to run throughout the power outage. The frugal power consumption of

the Philips FM-828 transceiver and the Tiny 2 TNC, together with the higher charging rate of the battery charger in its mains power supply during the periods of generator power kept this service operational.

The project to establish a new site at Telegraph Point for the VK2RCN repeaters is still progressing despite delays due to the bushfires. There has been a lot of work by the Committee. It will be another couple of months before an announcement is made regarding the success or otherwise of the application for a grant towards the cost of this project.

Repeater Linking, Multi Protocol Repeater and VK2WI Broadcast Relay

Work on this project has temporarily slowed due the personal circumstances of the club members responsible for this project. Work will be carried when time and opportunity are available.

The proposed meeting between the North West Repeater Linking Group and the coastal radio clubs has been postponed due to the bushfire situation.

Education and Amateur Licence Assessments

The club's long serving Education Officer Larry Lindsay VK2CLL together with Steve Wynn VK2ZSW and Bob Ecclestone VK2ZRE now have their AMC assessor accreditations.

A Foundation Licence training and assessment weekend is planned for early in the new year. As well, at least a couple of club members are planning to upgrade their licences.

If you know anyone who would like to obtain their Foundation Licence or would like to upgrade their existing licence, please contact Larry Lindsay VK2CLL.

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ORARC 2020 Calendar

The club's 2020 calendar is the most popular yet with photos of almost all of our current members. Copies are still available and may be purchased at the various club activities. The price, a mere \$2 each.

The club meeting dates and the ORARC Field Day dates are all marked on the 2020 Calendar. The calendar also contains the details of the frequencies for the club's repeaters.

Thank you to Steve Wynn VK2ZSW for creating this year's calendar. Steve has done a great job to make the 2020 calendar an outstanding one.

As always, ORARC is indebted to Jaycar Port Macquarie for their sponsorship of the printing of the calendar. Thank you Jaycar.

2020 Callbooks

Sadly, there is no 2020 callbook this year. After 105 years of annual WIA Callbooks, last year's 2019 WIA Callbook is likely to be the last to be published. The Wireless Institute of Australia was founded in 1910 and is the oldest national Amateur Radio Society in the World. The first Callbook was published in 1914 with the title of "Wireless in Australia". It was preceded by a single page list of WIA Members and Commercial Stations published by the Wireless Institute of Australia of NSW. The Wireless Institute of Victoria published a listing of experimental, commercial and Navy stations in 1913. The First World War began shortly after and on the 14th of August 1914, all Australian Experimental stations were closed down.

The first Callbook provides a valuable snapshot of Experimental stations licenced before World War 1. After the cessation of hostilities the annual WIA Callbooks continued to be a valuable historical record of Amateur Radio activity. As an active Amateur for the last 50 years your president

has eagerly awaited the publication of each year's Callbook. Each issue has been heavily used and it is surprising how often old Callbooks are referred to.

The latest Callbook has always been an indispensable reference in Amateur Radio stations, not only in Australia, but throughout the world. Avid DXers would always regularly purchase at least the ARRL, RSGB and NZART callbooks. For a number of years the WIA Callbook included the list of New Zealand Amateurs which was particularly handy for those working New Zealand stations on 6 metres during the Sporadic E season. Over the years the WIA Callbook expanded to include a lot of very useful reference information including the DXCC entities which provided an essential listing of all the foreign callsign prefixes, basic information such as band plans, plus of course an up to date listing of Australian Repeaters and beacons.

Fortunately, many past Callbooks are archived on the internet and elsewhere so it is possible to do research even if you don't have access to the printed copies of the Callbooks. However, if publication of Callbooks after 2019 is not resumed, that will be the last year of Callsign reference material for future historians to research.

Yes, the ACMA website Register of Radiocommunication Licences https://web.acma.gov.au/rrl/register_search.main_page enables lookup of current Australian Callsigns but as soon as callsigns lapse the details are no longer available so past history is lost. For example, it is not possible to see who held your callsign before it was issued to you. The importance of current Callsign information in the international Amateur Radio community can be gauged by the popularity of on-line databases such as QRZ.com.

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Estate Equipment

ORARC has received a generous donation of the radio equipment from the estate of our late esteemed Life Member Charles Edmondson (SK) who passed away in November 2019. Thank you to Evan Campbell, stepson of Charles for making this donation.

The equipment will be checked and photographed for inclusion in a listing in the March 2020 issue of Oxtales. All proceeds of the sale of this equipment will go to ORARC.

Also in the March 2020 issue of Oxtales will be the promised supplementary Silent Key vale Charles Edmondson VK2KCE (SK). This article has been held over to coincide with the listing of his estate equipment for sale.

Milestones

Just a reminder that members who turn 85 years are rewarded with Life Membership. Eligible members must be nominated by the end of June so that they can be included in the agenda for the ORARC Annual General Meeting. Please let the Committee know of any members who will become eligible in 2020.

It is with great pleasure that we welcome returning member John McDonagh VK2VY of Port Macquarie. John had been an active member of the club during the 1980s and 90s. He was a great proponent of Packet Radio which was the dominant digital mode of era. John is already working on setting up digital modes on the current computer platforms.

Microwave Link to New Zealand

I met up with Rex Moncur VK7MO who was coming up the North Coast to work 10 GHz across to New Zealand. We met up at Port on Sunday the 29th of December and had a cappuccino in the morning. Rex then went off to the lookout on Mount

Yarrahapinni. Unfortunately on Monday morning the 30th of December the duct was below the Mt Yarraphapinni lookout so he relocated to the water tower at Crescent Head, where he successfully worked across to the South Island of New Zealand on both digital and SSB voice on 10 GHz. Then Rex also worked across to New Zealand on 23 cm and 70 cm. Quite an achievement!



Rex Moncur VK7MO

Grant Snowden VK2MAX from Kempsey assisted Rex in helping set up the equipment and in answering all the questions from the onlookers at Crescent Head. Scott Dening VK2IF also from Kempsey assisted.

Best wishes to all members and their families for a happy and healthy 2020.

Henry Lundell VK2ZHE
President



The Communications Caravan ready for action



Amateurs seeking to establish emergency communication should use these EM-COMM frequencies in the first instance, or repeaters if available.

Radio Amateurs who are volunteers for WICEN, CREST, etc should keep themselves updated from the respective websites of these organisations.

Emergency Communication is one of the three main reasons Radio Amateurs have access to RF Spectrum. Please assist if and when you can.

As an IARU member society, the WIA has adopted these recommended frequencies. "Centre of Activity" frequencies are not spot frequencies or net frequencies. They are recommended as starting points for emergency traffic which may extend 5 kHz above or below the designated centre frequency.

- 3.600 MHz
- 7.110 MHz
- 14.300 MHz
- 18.160 MHz
- 21.360 MHz



**BUSHFIRE EMERGENCY 31st
December 2019 through 5th January 2020
Date : 31 / 12 / 2019**

**Author : Greg Kelly VK2GPK - WIA
President**

The WIA has received advice that there are major outages of telecommunications in areas impacted by the bushfires either currently or expected to occur overnight. This disruption advice currently applies to areas of NSW and VIC.

The scope and range of these impacts is unknown at this stage but are predicted to cover all internet and phone (fixed and mobile) and other commercial radio services.

The WIA kindly asks Radio Amateurs to monitor the EMCOM HF frequencies (as per IARU-R3 EMCOM bandplan on the WIA or IARU-R3 website) whenever feasible over the next 24 to 48 hours.

VHF and UHF Repeaters should also be monitored wherever possible.

**Permission to operate Maritime
Mobile Granted
Date : 14 / 12 / 2019**

Author : WIA Conference Organising Committee



Would you like to operate Maritime Mobile?

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Are you coming to the WIA Annual Conference 2020 in Hobart Tasmania?

Choose sea over sky and sail from Melbourne to Devonport for the start of the WIA Annual Conference 2020.

Apart from organising a special discounted rate with the Spirit of Tasmania providing discounted fares and accommodation for two weeks before and after the conference.

We have been given permission by the Maritime Operations group and the Vessel Masters to operate 6m, 2m and 70cm handhelds aboard the ship.

There are some condition of operation that need to adhered to:

Use of radios is to be in such a way as to respect other passengers.

Cannot spend time on outside deck areas after 10:30pm as this will cause alarm to security staff.

Advice must be given to Pursers and Hotel staff when passengers planning to use the hand held radios are travelling (note this will be coordinated via the internal processes and by way of using passenger booking reports).

In addition to the above it is recommended that any individuals planning to use their radio during the voyage, should identify themselves to the Purser at the reception desk (deck 7) on board at the commencement of the sailing, just to make sure that nothing has changed.

Although we have permission to use radios, TT-Line do reserve the right to deny use of the radios if it is deemed unsuitable by the Master, Hotel Manager or Security on a given sailing, this may be due but not limited to comfort for entire passenger complement, safety or security.

How do you book a place on the Spirit of Tasmania? Take a look at the Conference Information page on the WIA website [Link](#)

CWops Award for Advancing the Art of CW

Author : K7NJ Riki



CWops is pleased to announce that it is now accepting nominations for this prestigious award for the year 2020.

The purpose of the award is to recognize individuals, groups, or organizations that have made the greatest contribution(s) toward advancing the art or practice of radio communications by Morse code.

Criteria - Candidates for the award may be one or more of the following:

Authors of publications related to CW recruiters, trainers, mentors, coaches and instructors, Public advocates of CW, Organizers of CW activities, Designers and inventors who advance the art or practice of CW.

Note: The award is not limited to amateur radio operators or their organizations.

Nominations may be made by anybody (not limited to CWops members). See the CWops web site for rules and details of nominating. In order to be considered, a nomination must be received by March 18, 2020.

Presentation of Award will be at the Dayton Hamvention.

More information on the CWops web site [Link](#)

General Interest

GPS Coordinate Updates

NSW and Victoria Just Jumped 1.8 metres North

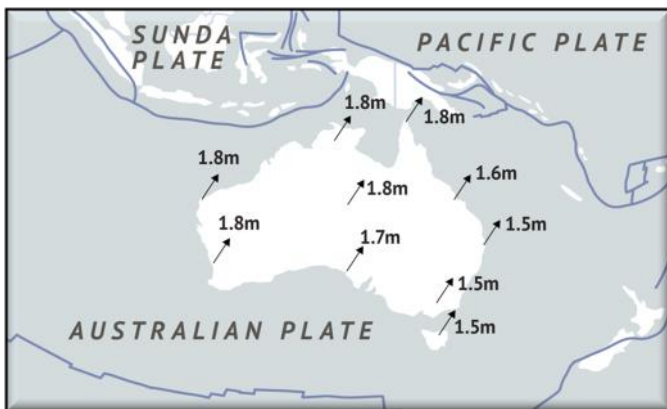
The Sydney Morning Herald, January 2,
2020

By Liam Mannix reporter for the Sydney
Morning Herald.

On New Year's Day 2020, NSW and Victoria jumped north by 1.8 metres – while the rest of the country remained firmly fixed in place.

No, you did not miss an earthquake. And no, we're not seceding from the rest of the continent.

Moving targets



Australia moves north-east 7cm every year. Our coordinates were last set in 1994 - so we're now about 1.8m wrong. The change is being made to fix a 1.8 metre inaccuracy that has crept into our GPS coordinates, caused by Australia slowly drifting north.

It will hopefully improve the accuracy of the blue location dot on Google Maps – and dispense with the days of seeing your Uber driver rock up on the wrong side of the road.

Australia sits atop one of the fastest-moving tectonic plates in the world. We move about seven centimetres north-east every year.

“That’s about the speed your hair or fingernails grow,” says NSW Surveyor General Narelle Underwood, who led NSW’s ‘jump’.

In the days of paper maps our tectonic drift did not pose a real problem. The continent might move but the distance from Melbourne to Sydney stayed the same. That meant Australia could get away with the slight inaccuracy that has crept in since we last set our coordinates in 1994.

But paper maps have gone the way of the dinosaurs; we use GPS now. And GPS notices.

That's because GPS satellites precisely locate you on the surface of the Earth. Because Australia's underlying map data is now off by about 1.8 metres, it throws off the accuracy of the GPS location. The blue dot is accurate, but the underlying map is not.

“Effectively the coordinate you have from your GPS has already moved the 1.8 metres – it's the mapping data that has been left behind,” says Dr John Dawson, director of positioning at Geoscience Australia, the federal government department supervising the fix.

Add in the inaccuracy of GPS itself – it is accurate to about five metres – and that explains why you can sometimes open Google Maps and discover yourself trapped inside a building or drowning in a lake.

To fix this, all Australian states and territories have agreed to update their coordinates by June. However, they are all doing it at their own speeds. Because Australia's underlying map data is now off by about 1.8 metres, it throws off the accuracy of the GPS location.

On January 1, the Victorian and NSW governments updated the coordinates of every road, property and geographical feature in their states,

Continued on next page

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essentially moving the south-eastern seaboard 1.8 metres north-east overnight.

Official government road maps and property boundaries will now line up perfectly with GPS location data.

“The real importance with data is it all lines up. Roads, people's property boundaries all line up,” says Ms Underwood.

It will take some time for companies like Google to pick up and implement the new data. But when they do, you will enjoy slightly more accurate satellite navigation.

Towards pinpoint accuracy

The coordinate shift is part of a wider project: super-accurate GPS. The federal government has invested \$225 million to upgrade Australia's GPS accuracy to a resolution of just 10 centimetres.

To do that, Geoscience Australia is busy building GPS stations across Australia, and has plans to launch two new satellites into orbit over the continent - the necessary infrastructure to calculate position down to a centimetre.

The project is handy for the average person, but its real value is in the future. Driverless cars, for example, need precise GPS data to know which lane they are in, and driverless tractors need to be able to get right up to the fenceline without ploughing it down.



Liam Mannix reporter..

Submitted by Henry VK2ZHE for Oxtales.

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VK2BOR 2020

GREATER REGION AMATEUR RADIO CLUB INC.

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APRS Digipeaters

CALENDAR SPONSORS

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MEETINGS

JANUARY	FEBRUARY	MARCH	APRIL
MAY	JUNE	JULY	AUGUST
SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER

Meetings are held at SES Headquarters, Central Rd., PORT MACQUARIE. (See marked dates on calendar below)
 Weekly Met held on Tuesdays at 8.00am & Thursdays at 7.30 pm on VK2ZPW 146.700 MHz - see OxiTel: CYGZ 91.300
 Monthly Meetings: 2.00 pm 1st Sat in month, unless marked otherwise. 3rd Friday Night Get-together 7.00 pm. GRAC Field Days

Club Contact Website: www.orarc.org
 email: vk2bor@orarc.org
 Postal Address: P.O. Box 712 Port Macquarie NSW 2444

Club Calendars are now available and can be purchased for \$2 from Henry VK2ZHE at any of the club meetings. Why not pick up yours today?

The Calendar is full of useful information and also would make a great present.

jaycar

148 lake rd port macquarie ph. (02) 6581 4476

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 2010 January edition of Oxtales.

In January 2010, Henry VK2ZHE was President, Jim VK2VIV was both Vice President and Secretary and John VK2KHB Treasurer. The club had 45 financial members.

The main club activities reports for the month were of the Christmas Function, a headphone distribution box project submitted by Arthur VK2ATM and a fascinating and informative part one of a report by John VK2KC on his trip to Western Australia and the installation and use of Amateur equipment in his car. The advice on installing radio equipment into his new car is still current today and part of John's report is reproduced below.

"The Trip To WA and Back : Part I (by John, VK2KC)

In my last article, prior to the trip to Perth, I shared with you the ups and downs of installing transceivers in a late model car, but my woes weren't over yet. I found that the vehicle's charge rate was a constant 15.9 volts. I remembered that the Icom IC-706's absolute maximum supply voltage is 16.0V DC, so with that in mind, I didn't turn on the Icom. I monitored the charge rate and found that when the battery was fully charged, the charging voltage remained at 15.9V DC!

The Auto Electrician couldn't shed any light on the subject, but then a chance meeting on the next Sunday, with the Service Manager of the local GM dealer, solved the problem.

Remember, I mentioned the circular device that is fitted around the negative (earth) cable?

Well, just as I suspected at the time of installation, it's a current sensing device. The Service Manager informed me that the charge rate is now part of the engine management system and is monitored by computer and adjusted to suit the demands of

the electrical system. It had been sensing more current flow through the earth cable and had upped the charge rate. He also warned me not to fit a larger capacity or a different type of battery because the main computer has to be changed as well!

I wonder how many will get caught in this trap?

Needless to say, ASAP I removed both of the transceiver's earth wires from inside of the pickup around the main earth cable, and that restored the charge voltage to a respectable 14.5 vdc, no matter what load I put on the battery. It's a calcium battery which has totally different characteristics to a normal lead acid battery. . .

The trip over:

The trip to Perth started out on the 27th August, with the first hop to Gilgandra, my old home town, via Maitland. I heard a fair bit of traffic on 2m on the various repeaters around Newcastle, but commonsense dictated that with the density of traffic on the Pacific and New England Highways, my concentration should be on the driving!

As I turned west from a short stop in Stockton, the only other repeater I was able to trigger was the Mudgee repeater, with no takers.

We arrived in Gilgandra at sundown where we had 2 birthday parties to attend, a 60th and a 90th. The only contact I made in Gilgandra on the local VK2RCC repeater was to Barry, VK4KKN, who happened to be visiting for the same parties. It's interesting to note that the RCC repeater is linked to 2 other repeaters, Dubbo and Parkes, so 2 metres covers a huge amount of real estate in that area.

On the following Monday August, at 6 am, we left Gilgandra for the remainder of the trip to Perth, with the first overnight stop planned at Port Augusta in South Australia, some 1170 Kms from Gilgandra. To be honest, I didn't know how I would go with an uncooperative knee, not being able to sit for 12 hours or more. Sure enough, by the time I got to Broken Hill I was very uncomfortable. Contact was made with only one local AR operator on their 2m repeater."

Continued on next page

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Editor's note:

The rest of the article that John wrote provided a fascinating read about radio communications and of course the countryside travelled. I urge members to read the report in full in the Oxtales back issues that Paul VK2ICQ has on the club's website <http://www.orarc.org/>.

Editor's note:

The installation of mobile equipment into mobiles used to be a relative electrical task with most of the complications being involved in the mechanics of physically fitting the equipment and cabling. However these days with the extensive computer management of vehicles it would be wise to do some research before attaching to the car's electrical system.

Arthur VK2ATM also had a practical article on a headphone distribution box.

'Headphone Distribution Box

By VK2ATM

Criteria: Build a headphone distribution device to minimize distractions inside the caravan when operating multiple transceivers.

Subsequent discussion decided to add microphone input to allow instruction and transmit facility and separate volume control for each headphone.

A data input/output to allow digital modes was also included in the wish list. To cap it off it was decided to make two of them.'

Editors note a full description of the build including a circuit diagram can also be found in the back issue of Oxtales January 2010.

From the same January 2010 edition of Oxtales is the following report of the 2009 Christmas Function. Held at the Port Macquarie City Bowling Club. It makes for interesting reading especially looking at the photographs where we all are so much younger!

ORARC Christmas Function

Trevor VK2TT

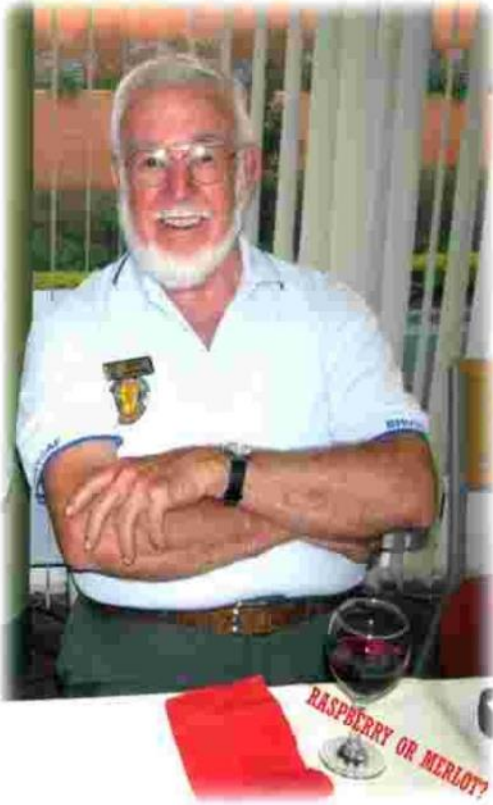
"Following last years successful function at the Port Macquarie City Bowling Club's smorgasbord, this venue was again chosen for our 2009 "Do". This year's function was held on Friday 27th November. The attendance of members and their XYL's totaled 18. An evening that involved "eating as much as you can eat", coupled with much social chit-chat, and an occasional sip of the cup that cheers, all added to the enjoyable festive atmosphere. Pictures are worth thousands of words, so it has been said. ."



Above Corrine and OM John VK2KC

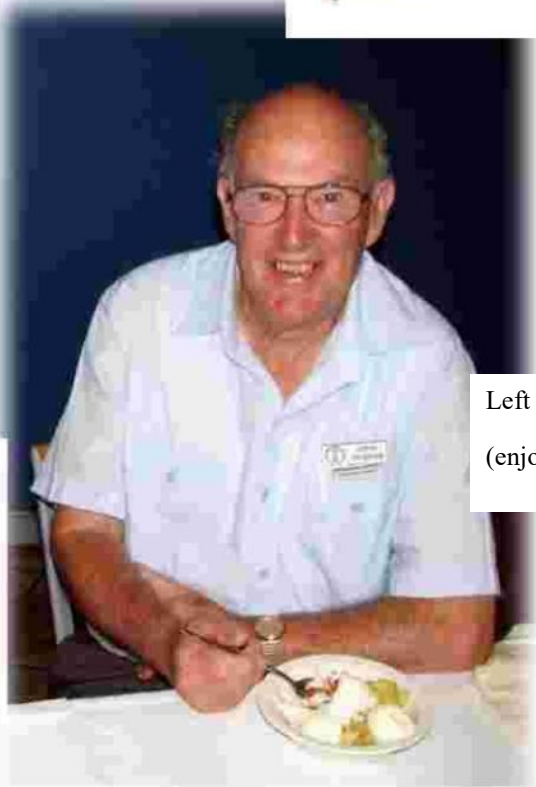
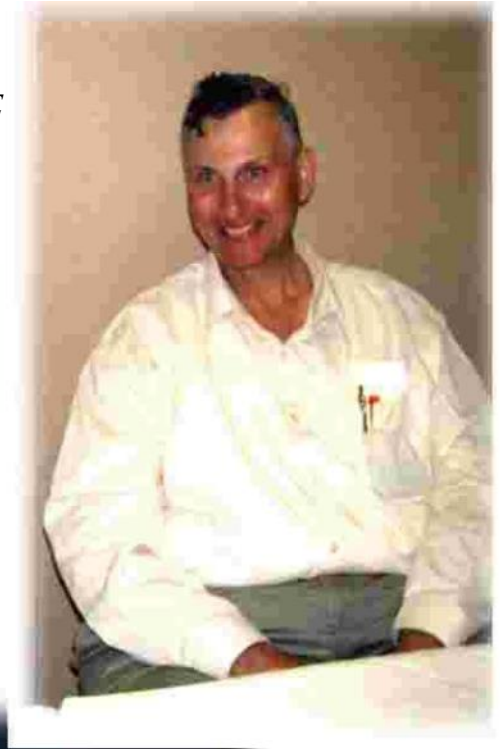
Below Lewis VK2AG and XYL Pam



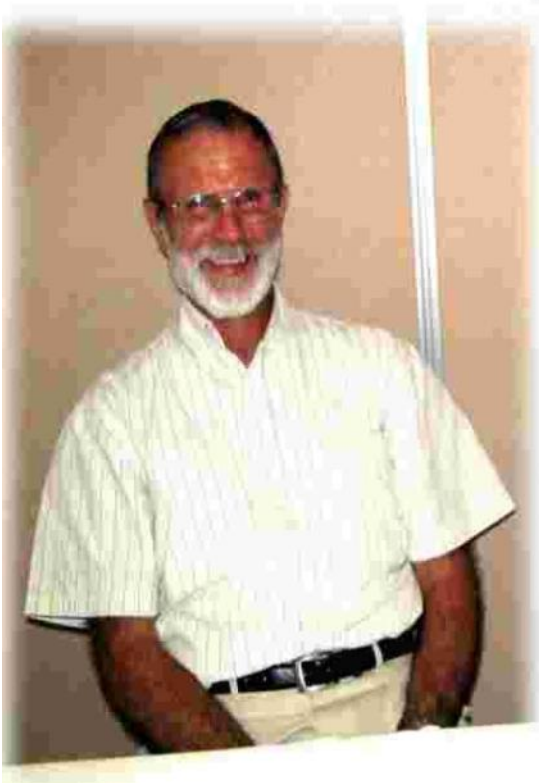


Right Henry VK2ZHE

*Left David VK2AIF
making decisions on
his next draught*



Left John VK2KHB
(enjoys deserts)



Above Larry VK2CLL Right Alan VK2GD
(SK), XYL Elaine, and Peter VK2HPF

Equipment from the Past

Clansman PRC-320



The Clansman PRC (Personal Radio Communications) was a British made solid state HF radio developed and built by Plessey enterprise and used by the British Army from 1976 to 2010. The sets were developed for communications between headquarters and fighting patrols and also special units.

The set operates in the 2–29.9999 MHz range with a possible 280,000 channels. RF power output was selectable at 3 or 30 watts. The PRC 320 could be used in a backpack frame or in a vehicle, for example a Landover.

The PRC320 could be used with a number of different Clansman antennas that were supplied with the set for example; a 2.4m whip antenna for portable manpack operation using HF groundwave communication.

Alternatively a dipole antenna could be used for HF skywave operation. The set included a built-in Antenna Tuning Unit (ATU) which electrically matched the whip antenna length to the radio frequency in use. The ATU could also match any other wire antenna to the operating frequency.

The use of morse code and later data transmission and reception could extend the range and add to the versatility of the UK/PRC 320. A number of data entry devices were produced as add-ons such as MEROD, TDED and Kipling.

Clansman HF sets continued to be used by the UK's Cadet Forces until 2015. Many of the sets found their way into amateur service after the Clansman system became

obsolete.

A popular modification by Radio Amateurs was to make provision for both upper and lower side band.

Another modification was to refurbish the power supply unit by mainly replacing old capacitors. The sets were once very popular with the Amateur Service as they were waterproof and could stand heavy physical abuse! They still can be found on ebay ranging from \$500 upwards depending upon condition and the number of accessories.

The sets originally were supplied with a large number of accessories including a hand cranked generator for emergency use. See photograph below.



Specifications:

Frequency range	2 to 29.000 MHz
Output Power	30 or 3 Watts 7.5 Watts on AM
Modes	USB, AM, CW LSB after Modification
Channels	280,000
Channel spacing	100 KHz
Sensitivity	SSB/CW 1.7 uV
Range	Whip 30 km Dipole 320 km
Battery	24 V NiCad
Measurements	330x250x90 mm
Weight	11 kg

References: <http://www.greenradio.com>,
<https://armyradio.com>

A Beginners Guide to Net Control

By Kevin VK2CE Extract From the August edition of Westlakes Amateur Radio Club.

Editors note: The following amusing tongue in cheek article on the pitfalls of net control.

'The question has been asked frequently, "how should a net controller do his or her job?" Written instructions are non-existent, so I have drawn upon my vast experience to produce the following rules for the benefit of all readers and aspiring net controllers.

Rule 1

Make sure you are at least five minutes late to start the net. Hopefully, someone will have pinched the frequency for a QSO with a mate and the net will have to move somewhere else thus making it difficult your people to find you.

Rule 2

On opening the net, take a minimum of five minutes to talk about the reason for the net, the starting time and frequency, the weather, band conditions, sun spot activity, DX etc. This will ensure you have the full attention of your check-ins so that when you call them in they will all try to get your attention at the same time making sure that ten minutes will be needed to sort out the mess.

Rule 3

If you have an amplifier and speech processor, run them at maximum power and setting - particularly if the net is on 80 metres. This means you will hear no splatter from adjacent stations to interfere with your net, thus all your group will have no problem hearing you.

Rule 4

Do not at any stage give out a list of participants on the net. This is a very dangerous practice as they may be tempted to pass the right to transmit onto the next person in line without giving you a chance to comment in depth on the content of the previous speaker's over. Keep them in the dark otherwise you lose control.

Rule 5

This brings us to the next golden rule - you must take the time, as it's only polite and courteous to do so, to acknowledge what your last speaker has said. He has not had a five minute over for nothing. He thinks it is very important that you should be made aware of the condition of his pet goldfish and you should mention that fact.

Rule 6

Do not acknowledge "breakers" under any circumstances. If they were not polite enough to be there at the start of the net you should not be interested in them. Tell them to go away and be on time next week. Be firm. After all you are the one who is in charge. Also, don't acknowledge the fact that unlicensed people might be listening to your net. These folk are called Short Wave Listeners and they would be better employed on the beach (as the name implies) rather than be listening busybodies to your business.

Rule 7

If for some reason you have attracted a fairly large group on your net, it is good practice to close the net before everyone has a second over. This ensures if they have something to say they will get it off their chests on the first over next time. You should never encourage talk for the sake of talk. This will damage your reputation as an efficient net controller. Never forget, it is your net! You are the one under pressure and examination here, not the 'blow ins' who may or may not show up.. You are the one who has given up the time to run the net for them and they should at least be grateful for that.

Follow these rules, and I guarantee success will be yours!

General Interest

The photograph below is of Australian Defence Forces operating what appears to be AWA equipment. It is believed to be of The Coast Watchers. If any member could provide any information on the Theatre of Operations, the personnel and the equipment used it would be of great interest. Please contact John VK2AYQ.



Amateur Radio on the International Space Station



Amateur Radio on the International Space Station ([ARRL](#)) reports that its first Interoperable Radio System (IORS) flight unit — serial number 1001 — has been delivered to NASA’s Johnson Space Center for launch in early March. The IORS represents the first major upgrade in ARISS equipment on the International Space Station since Amateur Radio gained a permanent presence onboard the ISS in 2000. In December, ARISS received approval from NASA Safety to launch the IORS on SpaceX CRS-20 and stow the radio system on the ISS for future installation.

“The IORS is a foundational element of the ARISS next-generation radio system and is an incredible engineering achievement by the ARISS hardware team,” ARISS International President Frank Bauer, KA3HDO, said. “This first element delivery will support easier radio mode transitions and enable new, exciting capabilities for hams, students, and the general public.”

The new system includes a higher-power radio, an enhanced voice repeater, and updated digital packet radio (APRS) and slow-scan television (SSTV) capabilities for both the US and Russian space station segments. The IORS consists of a custom-modified JVC Kenwood TM-D710GA transceiver, an AMSAT-developed multi-voltage power supply, and interconnecting cables. The IORS set to launch in March will be installed in the

ISS *Columbus* module.

Bauer said a second flight unit is expected to be launched sometime later this year for installation in the Russian Service module. The ARISS hardware team will assemble four flight units — and 10 IORS units in all — to support onboard flight operations, training, operations planning, and hardware testing.

“Future upgrades and enhancements to the next generation system are in various stages of design and development,” Bauer said. “These include a repaired Ham Video system — currently planned for launch in mid-to-late 2020, L-band (uplink) repeater, ground command operations capability, LimeSDR signal reception, a microwave ‘Ham Communicator,’ and Lunar Gateway prototype experiment.”

Bauer said a lot of “heavy lifting” remains to prepare the IORS for operation on the space station. “ARRL has 92 engineering requirements and our operations Phase III safety review to complete,” he explained. “The space agencies take a position of ‘trust, but verify.’ Thus, these engineering and safety ‘verifications’ all need to be closed out before the IORS can be unstowed and turned on. This will be the ARISS hardware team’s focus over the next few months.”

Bauer reminded that ARISS is almost entirely run by volunteers and encouraged [donations](#) for next-generation hardware developments, operations, education, and administrative functions.

Source: [ARRL](#)



MEMBERSHIP REGISTER

Membership List as at 1 January, 2020

No.	Cat	Surname	Given Name	Spouse	Call	Location
1	O	BAILEY	JOHN	(FLORENCE)	VK2KHB	PORT MACQUARIE
2	D	BLACKMORE	MARK	-	VK2XOF	BAULKHAM HILLS
3	L	BLYTH	BOB	-	VK2XIQ	TELEGRAPH POINT
4	O	BREWSTER	DAVID	-	ZL3DS	LAKE CATHIE
5	D	BRICE	GRAHAM	(CYNTHIA)	VK2VV	SCONE
6	O	BRUCESMITH	SANDY	(KAY)	VK2WH	PORT MACQUARIE
7	O/F	COLLEDGE	PAUL	(PAULA)	VK2ICQ	PORT MACQUARIE
8	O/F	COLLEDGE	PAULA	(PAUL)	VK2FPDC	PORT MACQUARIE
9	O	COOPER	GORDON	(GLENDA)	VK2GFC	LAKWOOD
10	O	COURT	RICHARD	(LINDA)	VK2CHC	PORT MACQUARIE
11	L	DANIEL	JIM	-	VK2FJKD	PORT MACQUARIE
12	D	DORAHY	ALEX	(ANNE)	VK2HBF	TOORMINA
13	O	ECCLESTONE	BOB	(DIANA)	VK2ZRE	KEMPSEY
14	D	EKERT	BRUCE	(YULIA)	VK2EM	FORSTER
15	O/F	FLETCHER	CAROLINE	(PETER)	VK2CZF	PORT MACQUARIE
16	O/F	FLETCHER	PETER	(CAROLINE)	VK2HPF	PORT MACQUARIE
17	O	FROGGATT	DARREN	(KRISTY)	VK2MIA	PORT MACQUARIE
18	O	FROST	ROBERT	(SUSAN)	VK2CRF	PAPPINBARRA
19	D	GARLAND	JOHN	-	VK2CJG	JEWELLS
20	O	GILSON	BARRY	(FAY)	VK2LBG	PORT MACQUARIE
21	L	GREEN	LEWIS	(PAMELA)	VK2AG	PORT MACQUARIE
22	O	HANSEN	JOHN	-	VK2AYQ	PORT MACQUARIE
23	L	HARDING	DAVID	-	VK2AIF	WAUCHOPE
24	D	HARPER	JOHN	(VIVIANE)	VK2LJ	SYDNEY
25	D	HIRSCHEL	ALLAN	-	VK2OK	DOUBLE BAY
26	D	HUTCHESON	COLIN	(PAULINE)	VK5DK	MT. GAMBIER
27	D	JANES	LES	(BEVERLY)	VK5JL	SALISBURY HEIGHTS
28	D	JOHNSON	STEVE	-	VK2SJJ	BELLINGEN
29	O	JONES	PAUL	(SANDRA)	VK2DEL	PORT MACQUARIE
30	O	KOPPEL	HORST	-	VK2FHKO	LAKE CATHIE
31	O	KUCERA	PETER	-	VK2MPK	WAUCHOPE
32	L	LINDSAY	LARRY	(PENNY)	VK2CLL	HUNTINGDON
33	O	LINDQUIST	IAN	(BERNADETTE)	VK2IDL	PORT MACQUARIE
34	L	LUNDELL	HENRY	-	VK2ZHE	PORT MACQUARIE
35	D	MACNAUGHTON	JENNY	-	VK2BA	MUDGE
36	O	MCDONAGH	JOHN	KARIN	VK2VY	PORT MACQUARIE
37	O	MARE	HANS	-	VK2MRK	PORT MACQUARIE
38	O	MARTIN	CRAIG	(JENNY)	VK2CSM	SANCROX
39	D	McADAM	PETER	-	VK2EVB	COFFS HARBOUR
40	O	McGUIRE	MARK	-	VK2FMGM	PORT MACQUARIE
41	O	McLEAN	JOHN	(CORRINE)	VK2KC	PORT MACQUARIE
42	O	MEADE	DENNIS	(SUE)	VK2DAM	PORT MACQUARIE
43	D	MEEHAN	TERRY	-	ex-VK2KL	KEMPSEY
44	D	MELVILLE	STUART	-	VK2KSM	NORTHERN RIVERS
45	O	MESSINA	TOBY	-	VK2XTX	PORT MACQUARIE
46	D	MILLS	TIM	-	VK2ZTM	BEECROFT
47	L	MONCK	ARTHUR	-	VK2ATM	PORT MACQUARIE
48	O	MULLINS	RAY	(LYNNE)	VK2JU	PORT MACQUARIE
49	O	NEIL	JIM	(CAROL)	VK2VIV	PORT MACQUARIE
50	O	NEWHAM	LAURIE	(ROBIN)	VK2ELN	PORT MACQUARIE
51	D	NIVEN	TREVOR	(BETH)	VK5NC	MT. GAMBIER
52	D/F	O'BRIEN	GRAHAME	(JUDY)	VK2FA	CARDIFF
53	D/F	O'BRIEN	JUDY	(GRAHAME)	VK2HZV	CARDIFF
54	D/F	PETTET	JOHANNA	(STEVEN)	VK2FJMM	ILARWILL VIA MACLEAN
55	D/F	PETTET	STEVEN	(JOHANNA)	VK2ZVG	ILARWILL VIA MACLEAN
56	L	PILLEY	DAVID	-	VK2AYD	KING CREEK
57	O	PISANI	VIC	(MEREDITH)	VK2UVP	BONNY HILLS
58	D	PRATT	PETER	-	VK2PX	PENNANT HILLS
59	O	RAE	THOMAS	-	VK2ATR	PORT MACQUARIE
60	D	RAY	ROBERT	-	VK2ZWZ	SINGLETON
61	D	ROMAINE	PAUL	-	VK2UPR	PORT MACQUARIE
62	O	TERRY	COL	(KATHLEEN)	VK2LCT	YIPPIN CREEK
63	O	SANDERS	BILL	(SUELENE)	VK2FWHP	REDBANK
64	O	SMALL	ROBERT	(LYNN)	VK2BIG	LAKE CATHIE
65	D	SWINDLEY	RON	-	VK2DDQ	KEMPSEY
66	O	SMITH	LYLE	(JEANNINE)	VK2SMI	WAUCHOPE
67	O	SOUTHWELL	IVAN	-	VK2IJS	PORT MACQUARIE
68	L	THATCHER	TREVOR	-	VK2TT	WAUCHOPE
69	D	THOMPSON	DES	(BETTY)	VK9FLHI	LORD HOWE ISLAND
70	O	THOMPSON	LARRY	(KATHLEEN)	VK2LJT	TUNCURRY
71	O	WALKER	BRUCE	(GWEN)	VK2HOT	PORT MACQUARIE
72	D	WALKER	STUART	-	VK2BMX	BEECROFT
73	O	WALSH	STUART	(JENNIFER)	VK2FSTU	WAUCHOPE
74	O	WARD	MICHAEL	-	VK2FMDW	PORT MACQUARIE
75	O	WINCHESTER	JOHN	(PAULINE)	VK2NJJ	PORT MACQUARIE
76	O	WYNN	STEPHEN	(LYALLE)	VK2ZSW	YIPPIN CREEK
77	D	YORSTON	ROBERT	-	VK2CAN	ROSEVILLE

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