



# OXTALES

First published 1980

Newsletter of the Oxley Region Amateur Radio Club Inc.,

PO Box 712 Port Macquarie 2444

Club email address: vk2bor@orarc.org

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

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

ORARC's Forty-seventh Anniversary Year

## May 2018

Compiled by VK2AYQ & VK2TT

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### President's Report

#### May 2018 President's Report



#### ORARC 2018 Field Day

The ORARC 2018 43<sup>rd</sup> annual Field Day takes place on Saturday the 9<sup>th</sup> and Sunday the 10<sup>th</sup> of June during the Queen's Birthday Weekend. The venue will be the Wauchope High School hall in Nelson Street, Wauchope.

The change of venue is necessary because the usual venue, the Tacking Point Surf Life Saving Club hall, is being renovated during June so is not available for the Field Day. The surf club hall was renovated a couple of years ago but the club received a second grant this year to complete stage 2 of the renovations. Thank you to Stuart VK2FSTU for all his effort in securing the Wauchope High School Hall for the Field Day.

The Field Day dinner will be at 6pm on Saturday the 10<sup>th</sup> of June in the Seaview Room at the Port Macquarie Golf Club on Ocean Drive. The full menu is available

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

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## Down the Coax

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

Monthly General Meeting  
Saturday 5 May 2018 2:00 pm

World Telecommunications Day  
Thursday 17 May 2018. AX prefix permitted

Friday Night Get-Together  
Friday 18 May 2018 7.00 pm

Monthly General Meeting  
Saturday 2 June 2018 2:00 pm

ORARC Field Day Wauchope High School Hall  
Nelson Street, Wauchope  
Saturday 9 and Sunday 10 June 2018  
Field Day Dinner Port Macquarie Golf Club  
Saturday Night 9 June 6pm

Friday Night Get-Together  
Friday 15 June 2018 7.00 pm

Winter VHF/UHF Field Day  
Saturday 23 and Sunday 24 June 2018

Monthly General Meeting  
Saturday 7 July 2018 2:00 pm

Friday Night Get-Together  
Friday 20 July 2018 7.00 pm

## Net Controllers' Roster

Nets on Voice Repeater VK2RPM 146.700 MHz

**Sundays**  
(0900 Local)

**Thursdays**  
(1930 Local)

### May 2018

VK2CHC	May - 06	VK2ZHE	May - 03
VK2FMGM	May - 13	VK2ICQ	May - 10
VK2CHC	May - 20	VK2EM	May - 17
VK2FMGM	May - 27	VK2ZHE	May - 24
		VK2ICQ	May - 31

### June 2018

VK2CHC	Jun - 03	VK2EM	Jun - 07
VK2FMGM	Jun - 10	VK2ZHE	Jun - 14
VK2CHC	Jun - 17	VK2ICQ	Jun - 21
VK2FMGM	Jun - 24	VK2EM	Jun - 28

### July 2018

VK2CHC	Jul - 01	VK2ZHE	Jul - 05
VK2FMGM	Jul - 08	VK2ICQ	Jul - 12
VK2CHC	Jul - 15	VK2EM	Jul - 19
VK2FMGM	Jul - 22	VK2ZHE	Jul - 26
VK2CHC	Jul - 29		

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with payment as you order. The food is excellent.

Radio Supply of Bellingen has very generously sponsored the hire of the Seaview Room in the Golf Club for the dinner. Thank you Gary VK2ZKT.

The Field Day will have all the usual attractions with fox hunts on both days, disposals; bring your items to sell, no commission charged, barbeque lunch both days with bacon and egg breakfast available both days. Don't miss out on the traditional fruit salad and ice cream dessert following Sunday lunch. As usual, tea and coffee and biscuits will be free throughout the two days to those who have registered.

Sunday is the trading day for the commercial traders.

Radio Supply from Bellingen <http://www.radiosupply.com.au/> will have stock brought in especially for the Field Day. Thank you to Gary Ryan VK2ZKT and Carol VK2FCSR. Gary will also have an interesting range of his home brew projects on display. This will include his uBitX 5 band HF 10 Watt QRP HF SSB/CW transceiver.

Jaycar <https://www.jaycar.com.au/> are supporting the Field Day again this year. If you don't already have one you will be able to pick up a new Jaycar catalogue.

Remember to bring your latest project along and enter it into the Home Brew competition and display. Last year the Home Brew competition was very popular with some excellent projects on display. This year we are expecting even more entries than ever with several amateurs working hard to complete projects in time for the Field Day.

ALARA <http://www.alara.org.au/> will be there again this year. Thank you to Dot VK2DB and John Bishop VK2ZOI. Dot

will have on display the magnificent ALARA quilt that she won at the ALARA meet in Canada last year.

ARNSW <http://www.arnsw.org.au/> will be in attendance as usual. Thank you to Tim Mills VK2ZTM and Mark Blackmore VK2XOF.

There will be demonstrations of the various digital modes on both HF and VHF. See how simple it is to operate the new digital modes using a transceiver such as the Yaesu FT-991 which has a USB port that connects directly to your computer. Transceivers without a USB are easily connected to a computer via the sound card using a simple interface which can be home constructed.

See the SharkRF OPENspot digital radio hotspot. This stand-alone hot spot has a UHF multi mode digital radio transceiver which has the ability to cross connect to several of the common digital mode systems via the Internet. For example you can use your C4FM digital radio to communicate with DMR stations on distant DMR repeaters or rooms. The OPENspot is an impressive device and several ORARC members are already using it.

Please make yourself available when calls are made for assistance in running the Field Day. By sharing the workload we can all enjoy the weekend without anyone being overworked. It is important to make the field day a success as it is the major fund raising activity for the year.

The Field Day program is included with this issue of Oxtales. The program can also be downloaded from the ORARC website [http://www.orarc.org/?tribe\\_events=orarc-field-day-2018](http://www.orarc.org/?tribe_events=orarc-field-day-2018)



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## AMSAG Car Rally



*Two great photographs from Stuart VK2FSTU, above capturing the essence of speed and below the quintessential rally road through the forest.*



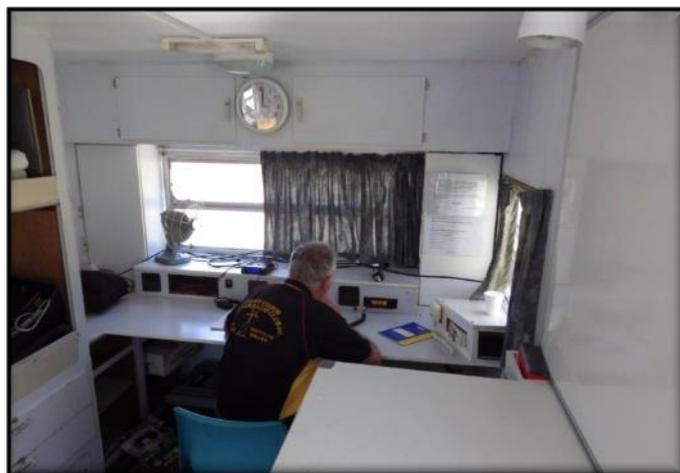
Thank you everyone who participated in the AMSAG Blacksmiths Inn car rally on Saturday the 17<sup>th</sup> of March 2018 by providing the safety communications.

Thank you to Lyle Smith VK2SMI for taking over the co-ordination of the communications when Steve Wynn VK2ZSW had to

reluctantly step down due illness. Lyle did a sterling job in juggling the allocation of the only just adequate number of personnel to man the check points required by the rally organisers. This was critical to the success of the ORARC participation in the rally. It was made all the more difficult by a number of changes to the requirements close the date of the event. Thank you to Lyle for a great job, and thank you to everyone who volunteered and very competently carried out their allocated tasks.



*The Clubs communication Caravan above with Arthur VK2ATM operating below.*



The club's Communications Caravan was set up on the Saturday morning in the car park of the Kew Hotel. Thank you to Arthur Monck VK2ATM, Rob Frost VK2CRF, Vic Pisani VK2UVP and XYL Meredith, and Lyle Smith VK2SMI for getting the caravan set up prior to the briefing at

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Hérons Creek so that VK2BOR was already operational as people started to arrive at the briefing. Special thanks to Rob for bringing morning tea to the caravan.

After the briefing at Herons Creek the radio traffic increased as people headed to their allocated check points. Arthur VK2ATM and Henry VK2ZHE manned VK2BOR from the caravan and Rob VK2CRF set up at the rally headquarters at Blacksmiths Inn at Johns River to pass the liaison and car stage time traffic to the rally organisers.

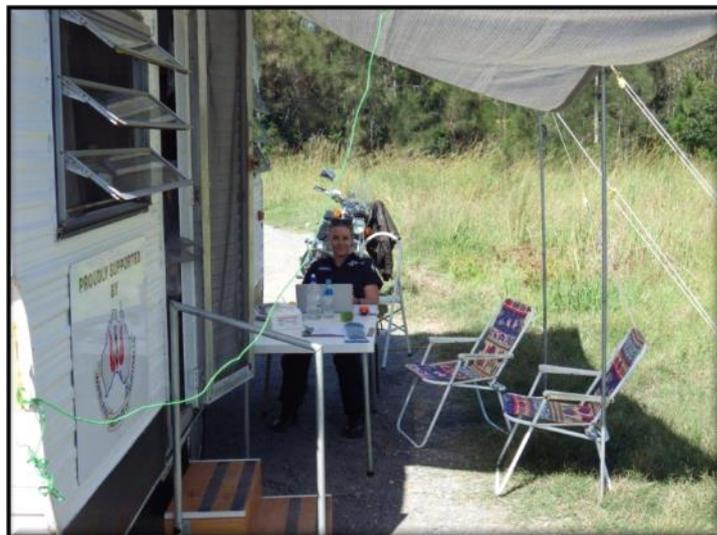


*Car park at Kew refueling point. Conveniently close to the Kew Hotel who serve the famous Kew hamburgers which help keep the crew and radio operators going!*



The car park of the Kew Hotel was the refueling point for the rally cars. The rally official at the carpark recorded the stage times of the cars and these times were then relayed by VK2BOR to Rob VK2CRF at the Johns River rally headquarters. The numbers of the cars starting and finishing

each stage were passed to VK2BOR by the start and finish operators. There was significant attrition of cars in this event which increased the amount of radio traffic, especially when cars came to a halt on the stages and the checkpoints became critical in confirming the welfare of the cars and their occupants. Even the recovery vehicle broke down!



*Rally paramedic*

During the daytime stages the rally paramedic was stationed at the carpark and enjoyed the shade of the caravan annex. Thankfully, she had a quiet day.

There was a lot of radio traffic prior to and during the rally. The Middle Brother Mountain VK2RPM 146.7 MHz to metre repeater was used primarily between VK2BOR and the check points. The 438.525 MHz 70 centimetre UHF repeater was used to pass the traffic between VK2BOR and Rob VK2CRF at the Johns River rally headquarters. Additionally, VK2BOR monitored the UHF CB communications network used by the rally officials and their vehicles. Peter Kucera VK2MPK set up a UHF CB radio relay point for this network to relay traffic when officials were unable to make direct contact. Peter regularly does this for the rallies. Well done, Peter.

During the rally difficulties were experienced in communicating on both the amateur VHF and UHF frequencies and on UHF CB. There

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was a temperature inversion present over the area in which the car rally was run. Normally the resultant ducting of VHF and UHF signals is beneficial for working long distances but during the rally the presence of the duct refractive layer greatly reduced the strength of signals between the rally checkpoints and the higher elevation Middle Brother Mountain repeater and relay sites.

Unfortunately the paths between many of the checkpoints and between the checkpoints and VK2BOR at Kew were far from being line of sight so direct VHF or UHF simplex communication was not possible. However, through ingenuity and considerable effort on the part of some of those who were manning checkpoints the traffic was still passed.

Thank you to everyone for their patience and diligence in ensuring that traffic got through. In the past we have set up HF back up communications in the event of just these sorts of problems but HF has rarely had to be used so it wasn't included in the strategy for this rally. However, in the light of the problems encountered with VHF and UHF communications in this rally, the need for HF backup will have to be reconsidered for future rallies.

The ORARC involvement in providing rally communications didn't end until after 8 pm so it was a long day for everyone. The night time finish added an extra degree of difficulty and increased the logistics for everyone who was involved. Thank to everyone for maintaining a high standard of communications right to the close down.

Those who participated include Lyle VK2SMI, Arthur VK2ATM, Rob VK2CRF, Henry VK2ZHE, Bob VK2ZRE, Stuart VK2FSTU, Glen VK2FAIL, Dennis VK2DAM, Bruce VK2HOT, Bob VK2BIG, Vic VK2UVP and XYL Meredith, Larry VK2CLL and John VK2AYQ.

There were lots of highlights during the rally. Those at the stage starts and finishes,

and at the checkpoints, were treated to some interesting and at times spectacular sights.



Stuart VK2FSTU took a great number of action photographs of the cars. The weather was fine and sunny so there was plenty of dust to contend with. Fortunately at the Kew carpark the wind blew most of the dust away from the Communications Caravan. One particularly noteworthy car was number 46, a nondescript looking classic Plymouth PE whose performance belied its appearance, see Stuart's photograph below.



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## John Moyle Memorial Field Day

The John Moyle Memorial Field Day began at noon on Saturday the 17<sup>th</sup> of March 2018 but ORARC was committed to providing the safety communications for the AMSAG car rally which also ran on the Saturday until about 8 pm. The club's Communications Caravan had been set up in the carpark of the Kew Hotel for the car rally and it remained in the same location on Saturday night and Sunday morning for the John Moyle Memorial Field Day.

Once the car rally was over, Lyle Smith VK2SMI and Stuart Walsh VK2FSTU operated VK2BOR in the John Moyle Memorial Field Day from the caravan all Saturday night and Sunday morning. Rob Frost VK2CRF, Bob Ecclestone VK2ZRE and Henry Lundell VK2ZHE stayed on as well until after midnight before going home. Henry Lundell VK2ZHE came back on Sunday morning for the balance of the Field Day, and to help pack up and then tow the caravan back to Port Macquarie. Thank you to the above stalwarts



*Waiting for the late afternoon evening stage to start.*



*Front view of the Plymouth PE. Below the number 46 were the words "Deathproof".*



*Operators Stuart VK2FSTU and Lyle VK2SMI still standing!*

During the Sunday morning some adjustments were made to the caravan's HF 5 band trap vertical antenna to reduce the VSWR on some of the bands where the automatic antenna tuner in the club's Yaesu FT-991 transceiver had been unable to satisfactorily match the antenna across those bands. This problem had been an impediment to the ability to work the

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full number of stations heard during the late evening and night. After the adjustments to the antenna the radio's antenna tuner was easily able to obtain a match across all 5 bands.

The weather was fine throughout the weekend. Unfortunately band conditions were less than favourable and only a relatively small number of contacts were made. The activity during the early morning hours was well down. It seems that many Field Day stations made a lot of contacts during the Saturday afternoon and early evening but VK2BOR was unable to work the contest during that time as ORARC members were committed to the car rally communications.

Despite the relatively low points score the John Moyle Memorial Field Day participation was still enjoyable for the members who manned VK2BOR.

Thank you also to the members who participated in the Field Day from their home stations.

## Urunga Convention



Thank you to those who attended the 69<sup>th</sup> annual Urunga Radio Convention over the

fine and sunny Easter Weekend on Saturday the 31<sup>st</sup> of March and Sunday the 1<sup>st</sup> of April 2018. As usual, there was a good contingent of ORARC members at Urunga.



*Ivan VK2IJS and Lyle VK2SMI enjoy a chat and a break.*

Radio Supply had a great range of “must have” items ranging from connectors to multimeters. Gary Ryan VK2ZKT and Dr Carol Ryan VK2FCSR are long time supporters of events such as the Urunga Convention. They will of course be at the ORARC Field Day at the Wauchope High School hall during the June Long Weekend.



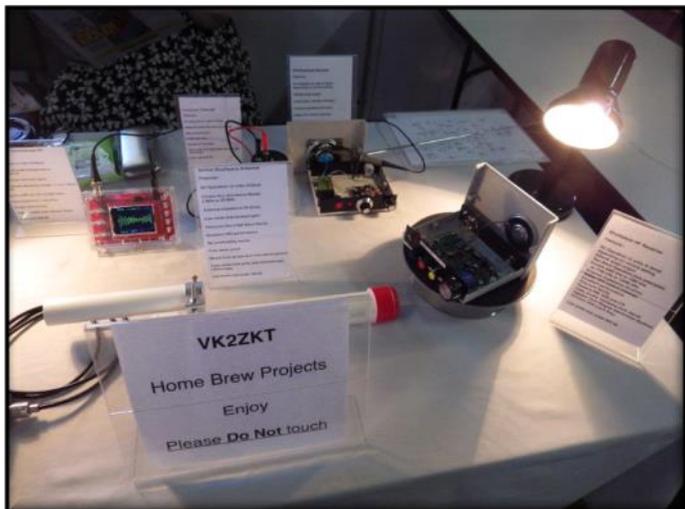
*Radio Supply Gary VK2ZKT and Carol VK2FCSR chat about their range of items.*

Gary had an interesting cross section of his home brew projects on display on the right hand end of the Radio Supply stand at Urunga. The working display included his digital LCD oscilloscope kit, continuity tester, FM broadcast receiver kit and shortwave receiver kit. The item that perhaps created most interest was his very compact high performance active shortwave 2 – 30 MHz receive antenna. All these professional looking home constructed useful projects demonstrate that home

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brewing is far from dead. There are lots of very reasonably priced kits available on the market and once built and working it just takes a little bit of imagination and effort to mount the electronics into some of the very nice cases that are also readily available.

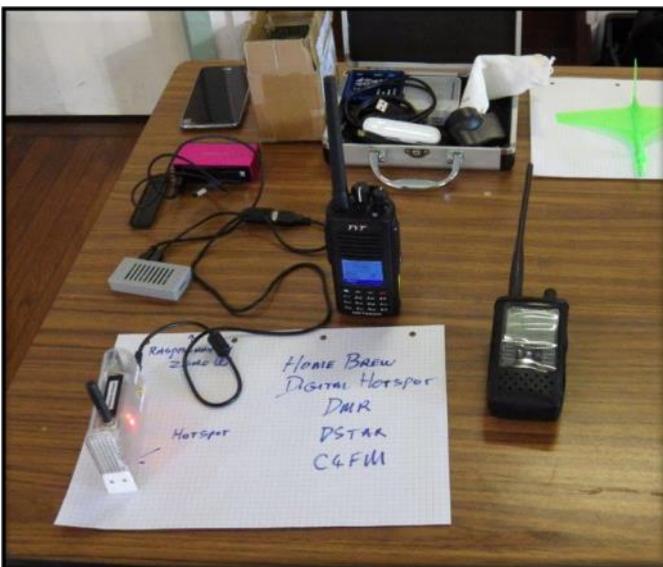


Gary always illuminates his home brew displays with the soft glow of tungsten filament lamps in his desk lamps. He admits to having an “adequate” reserve stock of replacement bulbs as they are no longer an “over the counter” commodity in Australia. Nostalgia is a wonderful thing!



ORARC club member Peter McAdam VK2EVB always sets up an interesting display of modern technology at Urunga. This year his stand alone Shark multimode digital voice

hotspot created a lot of interest and Peter was kept busy answering lots of questions about digital voice and how to get a hot spot up and running. As well Peter had a set of three Pixie HF QRP CW transceivers for 80, 40 and 30 metres on display.



*Digital hotspot above Pixie QRP Kit below*



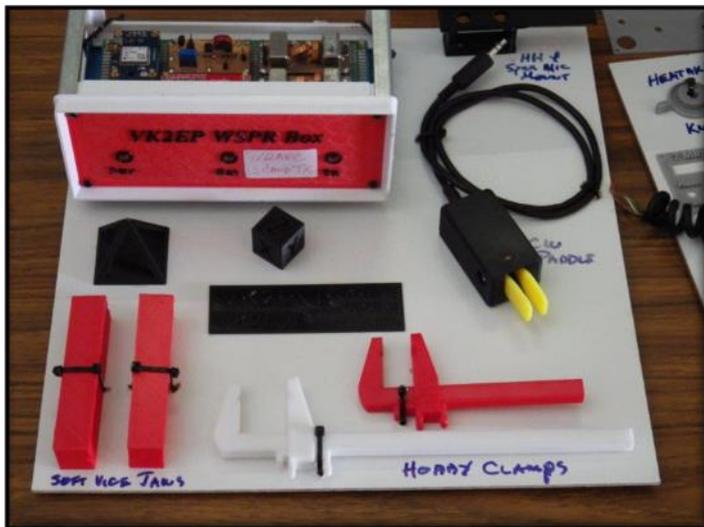
The centrepiece of Peter’s display was his Anycubic 13 Mega 3D printer. Peter had an interesting collection of diverse useful items that he had printed, all neatly arranged on labelled display boards. The items included custom front panels for projects and a number of different enclosures. These larger items were complemented by a range of brackets and clips.

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Peter VK2EVB demonstrating the 3D Printer.



Above a selection of objects "printed". Note the paddle keys.



Printed replicas of Heathkit knobs.

His HF dipole antenna centre and insulators were carefully studied by many people. The CW compact two paddle morse key demonstrated how a very useful operating accessory could be printed for far less than the cost of an equivalent commercial product. Also included in the display were some tools and toys. The printed replica vintage Heathkit knob was a good example of the ability to print replacements for such items which are now unprocurable. Those amateurs restoring vintage radios and equipment took special note. Filament plastic comes in two different types and both types are available in a wide range of colours.

Peter had the 3D printer in action and everyone found it fascinating to watch 3D objects rising from the printer's table. Peter printed a custom microphone for Gary VK2ZKT's uBitX 5 band HF transceiver kit.



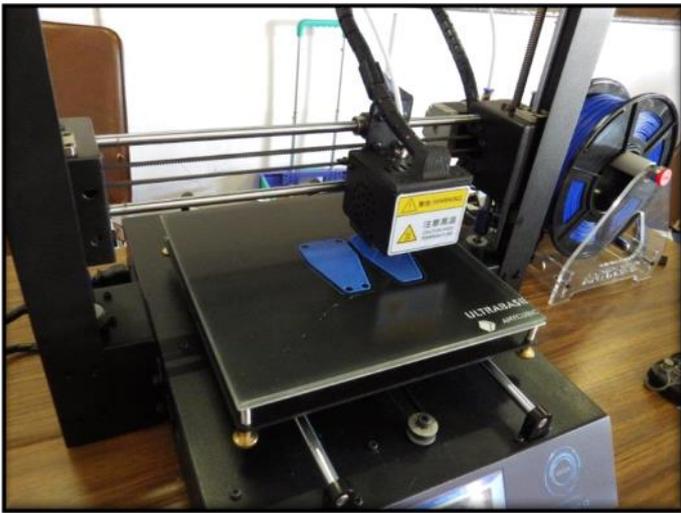
Peter VK2EVB showing Gary VK2ZKT the microphone casing for the kit.

This caused envy on the part of Henry VK2ZHE so Peter also printed one for Henry's uBitX HF transceiver project. As can be seen in the photographs these microphones were printed in a fetching blue colour in two halves which snap together perfectly to form a very nice looking hand microphone which accepts the electret microphone supplied with the

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transceiver kit. Come to the ORARC Field Day in June to see the uBitX HF transceivers in action with their distinctive blue hand microphones!



*Henry's VK2ZHE, blue microphone casing being printed!*

There were bargains to be had from the various collections of disposal items on offer on various tables in the Senior Citizens hall housing the Convention.

The foxhunts were keenly contested with a large contingent of dedicated hounds again making the pilgrimage to Urunga to do battle with the locals. Most of the hunters are coming to Port Macquarie on the June Long Weekend to contest the ORARC Field Day fox hunts in Wauchope. The exception is Bryan Ackerley VK3YNG and his team who fox hunt at the Mount Gambier Field Day each year. Mount Gambier in South Australia also holds their Annual Field Day on the June Long Weekend.



*A hunting we will go. Getting ready for the 'off'.*

The Foxes were rather cunning this year and had the hounds running around in circles. Some of the foxes were not found. Four foxes with different tones were hidden in most of the events. The 80 metre event with two foxes confused the hounds as one fox used a squid pole antenna and overpowered the other. As always, the 40 metre fun event was very popular. For this event only portable radios without directional antennas were permitted. Over the two days there were 10 fox hunts comprising both mobile and pedestrian events.



*I'm sure that there is a fox around here!*

Rodney Sommerville VK2TI from Broadwater near Evans Head took out the "Arnold Austin Award".

Darian Panter VK3FAST, from Scoresby in Melbourne, took out the "Brian Slarke Award" with most points for two days. His team comprising Monica VK3FFAB, Rod VK3FRME and Bryan Ackerly VK3YNG kept the local hounds on their toes.

Bryan Ackerly VK2YNG offered help and pointers to a new team, Paul Mainey VK2YX from Bonville and his grandchildren. This team did very well.

The night Fox hunt comprising six low power transmitters on two metres was won by Bryan Ackerly VK3YNG. He blitzed the field and found all six transmitters in 25 minutes. Quite an achievement.

Congratulations to ORARC club member

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Grahame O'Brien VK2FA on his well-deserved win in the Urunga Scramble.

Jamie Campbell VK2Y CJ won the Chocolate Easter Bunnies basket but he magnanimously asked that it be redrawn. Jamie has won the Easter basket on numerous occasions over recent years so it was almost expected that his ticket would be drawn first this year. It proves that his luck hasn't deserted him!

Henry Lundell VK2ZHE won the Baofeng high powered VHF/UHF dual band hand held transceiver.

The Technical Quiz set by Jeff Pages VK2BYY was won by Judy O'Brien VK2HZV. The General Quiz was won by Helen Williams, XYL of Chris VK2YMW.



*Hounds assembling for the night fox hunt. All wearing high visibility clothing.*

The Field Day Saturday night Dinner at the Bowling Club was well attended.



*The youngest team of fox hunters Paul Mainey VK2YX from Bonville with his grandchildren.*

As with all Field Days, the Urunga Convention organisers thanked their generous sponsors for the donations which made the Convention affordable.

There was a big round applause in recognition of the tireless efforts of the Urunga Radio Convention Members who helped to organise and run the Convention. There was special recognition of the kitchen helpers. The pancakes expertly cooked to order by Terry Wood VK2TEZ were the dessert of choice after the delicious Macksville pies. A few astute attendees snapped up the few pies remaining at the end of the Convention. I was one of those who enjoyed a pie for dinner when I arrived home on Easter Sunday night. Delicious! Another nice touch deserving mention is that everyone departing the prize presentation received an Easter Bunny to take home.

Next year will be the 70th Urunga Convention. The Urunga Radio Convention was formed by a small group of amateurs including Crieff Retalick VK2XO (SK) and Peter Alexander VK2PA (SK) in 1949 at the "Do Me" boat shed on the Kalang river at Urunga. This is where Anchors Wharf Restaurant is now located. The Convention has run continuously each subsequent Easter, aided by Brian Slarke VK2ZCQ, sadly now a Silent Key too, and a small band of dedicated helpers. It is the longest running "Foxhunting" Field Day in Australia.

There is a lot of history recorded of the early Urunga Radio Conventions. Look on line at <http://users.tpg.com.au/goldy2/index.htm>. Each year the extensive collection of memorabilia is on display at the Convention. If you haven't already taken the opportunity to peruse the display, make it a priority at the 2019 Convention next Easter.

The 2019 70<sup>th</sup> annual Urunga Radio Convention will be a very special one. The Committee reminds us that everyone is

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welcome to attend. There is a special invitation to older amateurs who might have been to Conventions in the past, The Committee would like to see you next Easter to help celebrate the 70<sup>th</sup> annual Urunga Radio Convention. Mark Easter 2019 in your diary now.

Thank you to Ken Golden VK2DGT for generously providing much of the material used to compile this report. He also supplied some of the accompanying photographs.

**Urunga Radio Convention Photographs**



*The dinner above right and left; below Judy VK2HZY receives Technical Quiz prize from Ken VK2DGT*



*Lyle VK2SMI, Merv VK2DMS, Chris VK2YMW, Ivan VK2IJS and Kevin VK2CKD*



*Clockwise from far left Rodney, VK2TI with his trophies.*

*The team of Rod, VK3FRME, Monica VK3FFAB, Bryan VK3YNG, David VK3FAST receiving the Brian Slarke award from Ken VK2DGT*



*Bryan VK3YNG receives award for Fox-hunt Champion*

*Henry VK2ZHE with major raffle prize.*

*Helen winner of General Quiz.*

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## Yaesu FT-991

### Firmware Upgrade Night

At the April ORARC Friday Night Get-Together on the 20<sup>th</sup> of April 2018 Paul Colledge VK2ICQ very kindly ran a clinic to upgrade the firmware of members' Yaesu FT-991 transceivers. Last year's clinic was very popular and this year's clinic was even more popular. The latest release of firmware includes support for the additional features of the new DR-2X repeaters and Wires-X.

The FT-991 is an all mode HF/VHF/UHF base station transceiver covering all the Amateur bands from 160 metres to 70 centimetres. As well as the usual USB, LSB, CW, AM, FM etc analogue modes, the FT-991 can operate in the Yaesu Fusion C4FM digital voice mode which is available on the club's VK2RPM 146.7 MHz and 438.525 MHz and the VK2RCN 438.425 MHz repeaters. The FT-991 features Automatic Mode Selection (AMS) which enables the transceiver to automatically detect and switch between the analogue FM and the digital C4FM modes.

The FT-991 was fully described in the September 2015 issue of Oxtales which is available on the ORARC website Oxtales archives at <http://www.orarc.org/wp-content/uploads/2015/09/oxtales1509.pdf>  
The club has an FT-991 transceiver.

As the FT-991 is a modern digital software defined radio, the firmware is able to be updated to include the improvements and enhancements that are developed by the manufacturer during the life of the transceiver. After the transceivers at the clinic were upgraded they incorporated the same firmware as the very latest production batch of FT-991 transceivers.



*Paul VK2ICQ and Arthur VK2ATM look at the line of FT-991s to be upgraded.*

A total of 6 transceivers were upgraded at the clinic and Paul had already upgraded his own FT-991 earlier to test the new firmware. This included the club's FT-991 transceiver. The club is indebted to Paul VK2ICQ for doing the research and the setting up to upgrade multiple radios in a surprisingly short time. The upgrades went very smoothly and those members who took their radios to the clinic are enjoying the best possible performance from their FT-991 transceivers.

An enhanced version of the FT-991 is now available. It is the FT-991A <https://www.yaesu.com/indexVS.cfm?cmd=DisplayProducts&ProdCatID=102&ncProdID=490C4A71118AD0F4E825E89D821B73BB&DivisionID=65&isArchived=0> which has a real time spectrum scope. The FT-991 also has a spectrum scope but it is not real time. At any time you can take a snapshot of the band activity as a single sweep. The FT-991 uses the same receiver that is used for reception for the spectrum scope so the receiver audio is muted for the duration of the sweep. The FT-991A uses a second receiver for the bandscope so the the bandscope is always sweeping in real time without affecting the receiver that is used for listening. Naturally, the FT-991A is a little more expensive than the FT-991 as it is fitted with an extra receiver. It is possible to retrofit the second receiver to the FT-991 but this must be done at the factory so radios must be sent to Japan for this upgrade. Most dealers now only carry the FT-991A



*Paul VK2ICQ, Mark VK2FMGM, John VK2KC, Dennis VK2DAM, Ivan VK2IJS, Stuart VK2FSTU, Rob VK2CRF and Larry VK2CLL.*  
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## **Telegraph Point VK2RCN Repeater Site**

The new VK2RCN 53.800 MHz 6 metre repeater equipment is now almost ready for installation at the Telegraph Point repeater site. On Monday the 16<sup>th</sup> of April 2018 a working bee was held at the VK2RCN site. Those participating included John Winchester VK2NJJ, John McLean VK2KC, Arthur Monck VK2ATM, Rob Frost VK2CRF, Dennis Meade VK2DAM and Henry Lundell VK2ZHE.

Thank you to Rob Frost VK2CRF for bringing his daughter's battery powered whipper snipper to the working bee and cutting back the grass that had regrown since the previous working bee. The performance of the lithium ion battery powered whipper snipper still has everyone in awe.

John VK2NJJ measured up the dimensions for a new roof vent that is urgently required to replace the existing roof vent that is damaged and currently relying on a stone weight to hold its cap in place. John has sourced a replacement vent and it was installed on the 2<sup>nd</sup> of May. Thank you, John.



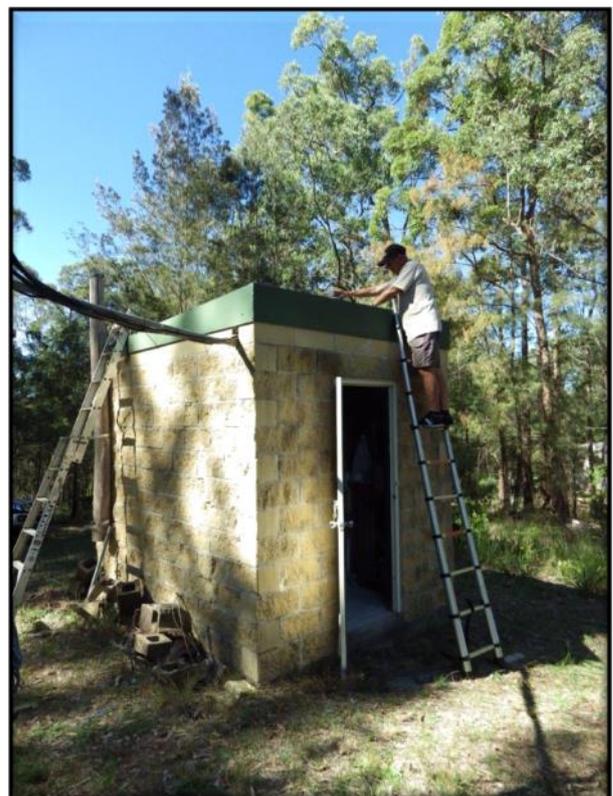
*The New vent installation with new roofing panel.*



*The completed new installation of the roofing vent. Compare this photograph with the old vent photograph to observe the difference.*



*The old vent*



*John VK2NJJ up the ladder doing the install.*

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At the working bee the temporary 6 metre ringo vertical antenna was installed on a pipe mast clamped to the existing disused power pole attached to the side of the building. Erecting the antenna required considerable dexterity as can be seen from the accompanying photographs.



*Assembly of the ringo on the ground.*



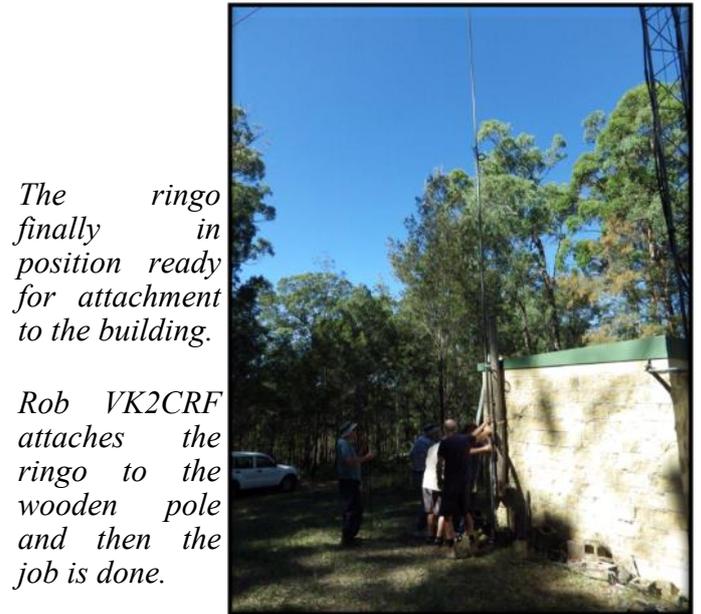
*Arthur VK2ATM starts to walk the ringo into position.*



*The base is put into position.*

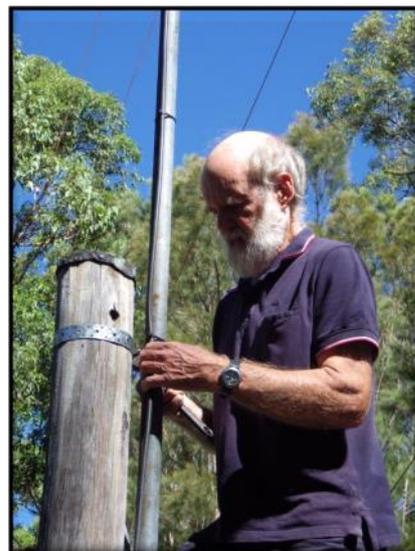


*All hands on deck and up she goes.*



*The ringo finally in position ready for attachment to the building.*

*Rob VK2CRF attaches the ringo to the wooden pole and then the job is done.*



*Many hands make light work. In the previous photographs the team members of John Winchester VK2NJJ, John McLean VK2KC, Arthur Monck VK2ATM, Rob Frost VK2CRF, Dennis Meade VK2DAM and Henry Lundell VK2ZHE can be seen. The ringo*



*attached to the side of the repeater building*



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Well that

John's utility and then placed in position inside the building as a four filter band pass/band reject duplexer.



*How many of these filters were there again?*

*was easy wasn't it! Arthur VK2ATM contemplates a task well done.*

John Winchester VK2NJJ very kindly transported to the site the four coaxial filters that comprise the duplexer for the 6 metre repeater.



*Not a job for the faint hearted these filters are massive.*

The size of the filters can be judged from the photographs showing the individual filters being manhandled from the rear of



*The assembled duplexer Rob VK2CRF with Arthur VK2ATM holding his spectrum analyser.*

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The plinth and collar for the duplexer RF filters can be clearly seen in the photograph of the assembled duplexer. The collar is particularly important as it ensures that the filters are held together on the plinth to form a stable structure. There is considerable mass in the duplexer so it is important that it should be physically stable.

Thank you to Arthur Monck VK2ATM for bringing his spectrum analyser to the working bee so that the alignment of the duplexer could be checked after being transported and reassembled. John VK2NJJ clearly treated the filters very gently when transporting them as it was found that alignment had not changed.

Thank you to Lyle Smith VK2SMI for donating a full height 19 inch equipment rack and delivering it to the site on Sunday the 15<sup>th</sup> of April in readiness for the working bee. Lyle was unable to attend the working bee as the Monday was a work day for him.



The rack ready for equipment to be installed.

Once the new rack has been bolted into place the existing VK2RCN 2 metre and 70 centimetre voice repeaters and the VK2RCN-1 APRS digipeater will be transferred to the new rack which will have sufficient space to accommodate those repeaters as well as the 6 metre repeater and the new DR-1X multimode digital voice UHF repeater and the Ubiquity link equipment. It is hoped to have the new 6 metre repeater in service before the ORARC Field Day on the June Long Weekend.

Planning has been in progress for some time to replace the mast guys and to install the VK2RCN 6 metre repeater folded dipole antenna as part of the mast refurbishment. The replacement of the guy wires is currently on hold due to various difficulties in finding suitable people to undertake the work. John McLean VK2KC is currently researching options to find an affordable solution.

### **Middle Brother Mountain VK2RPM Repeater Site**



*Lyle VK2SMI at the middle brother site note the new metal paling security fence which surrounds the TV transmitter site. Those bifurcations on the tops of the palings would be nasty things to tangle with!*

While the desensitisation of the VK2RPM 146.7 MHz 2 metre repeater receiver had still been an ongoing issue during dry windy weather, the equipment at the site

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had been performing well until the VK2RPM 146.7 MHz 2 metre repeater suddenly went off air on Easter Saturday, the 31<sup>st</sup> of March 2018. There had been traffic on the repeater earlier in the day and the 70 cm 438.525 MHz UHF repeater and the APRS 145.175 MHz digipeater were still working so the fault was confined to just one facility.

Lyle Smith VK2SMI and Henry Lundell VK2ZHE went to the site at short notice on the afternoon of Easter Saturday as it was prudent to restore the 146.7 MHz repeater to service as quickly as possible during the busy Easter holiday weekend.

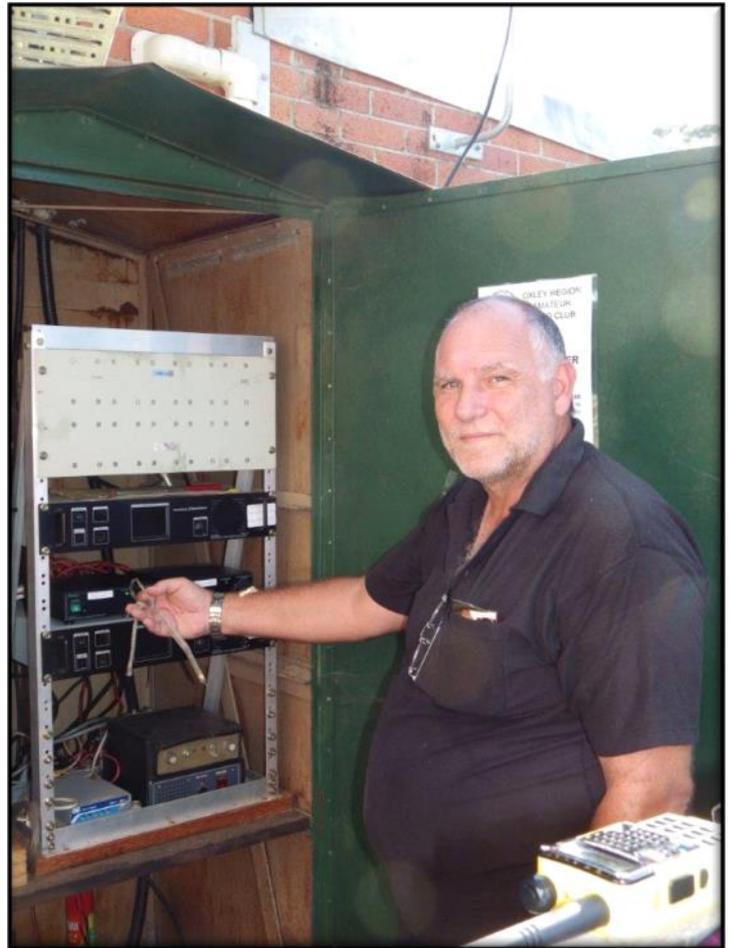
On arrival at the site it was found that the back up battery was flat and that the repeater was not receiving 12 Volt DC power from the mains powered switched mode power supply. It was suspected that the 12 Volt DC PowerGate that electronically switches between the battery and the mains operated power supply had failed. The power gate was replaced and the repeater powered up from the mains power supply and the battery was being charged as it should be via the power gate. The VK2RPM 146.7 MHz repeater was restored to service on the Saturday afternoon.



*Power gate replaced*

While on site Lyle VK2SMI also removed a snake skin that had obviously been recently shed on top of the VK2RPM-1 APRS

Philips FM-828 2 metre transceiver. The shedding of the skin had not caused any obvious damage and the owner of the skin could not be found in the equipment cabinet. The top of the transceiver must have been a pleasantly warm place for the snake to shed its skin.



*So this is what an electronic snake looks like!*

Electronics can be perverse and the VK2RPM 146.7 MHz repeater suffered a second failure after a little over two weeks at about noon on Tuesday 17<sup>th</sup> of April 2018, the day after the Telegraph Point working bee. The repeater had been in use during the morning and suddenly went off air.

Fortunately, Lyle Smith VK2SMI was on a rostered day off from work and immediately travelled to site on the Tuesday afternoon. Henry Lundell VK2ZHE gathered together all the spare repeater equipment and test equipment and arrived on site shortly after Lyle. This time it was found that the repeater had lost DC power when the back up battery had fully discharged but importantly, it was

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found that while the AC mains operated Switched Mode Power Supply was still showing that it had mains power, its DC output had shut down. Turning the power supply off and then back on restored its DC output and the power supply happily powered the repeater and charged the battery via the DC power gate. There was evidence that the site standby generator has recently run so there must have been an interruption to the mains supply.



*Test gear and battery compartment.*

The identical mains operated power supply for the 438.525 MHz 70 centimetre UHF repeater had not failed, nor had the power supply connected to the APRS digipeater. Since the switched mode mains operated power supply connected to the 146.7 MHz 2 metre repeater had now failed twice it was decided to replace it with a new one.

The 146.7 MHz repeater was restored to service on the Tuesday afternoon and has been performing faultlessly since.

While during subsequent testing, no fault has yet been found in the mains operated 12 Volt DC output switched mode power supply that had failed twice at Middle Brother Mountain, the power supply is still suspect so it was prudent to replace it with a new one. After careful testing, no fault was found in the DC power gate that had been replaced so it appears that the first repeater failure was caused by the same power supply shut down that caused the second failure.

It is hoped that TPG will carry out more of the promised work on the Middle Brother tower

in the near future as the noise problems affecting the 146.7 MHz repeater are still evident when the tower is dry. The performance of the 2 metre repeater improves greatly whenever the tower is wet.



*Repeater equipment at Middle Brother*



### **WICEN (NSW) Mid North Coast Group**

The recently formed [WICEN \(NSW\) Mid North Coast Region](#) group has been formally recognized by NSW State WICEN. At the first Annual General Meeting on the 7<sup>th</sup> of April 2018 Lyle Smith VK2SMI was appointed as the coordinator.

After the conclusion of the ORARC May 2018 Monthly General Meeting the WICEN (NSW) Mid North Coast Region will hold its monthly meeting. Current and prospective WICEN members are invited to attend the meeting. A few more members are needed in order to make a viable Region. Anyone interested in joining WICEN should contact Lyle Smith VK2SMI,

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or just come along to the meeting.

In past years WICEN have supported the Alzheimers Australia [Memory Jog and Walk](#) in Port Macquarie held on a Sunday morning a week or so prior the Queens Birthday Long Weekend. Alzheimers Australia is now known as Dementia Australia. The dates for the 2018 Memory Jog and Walk in a few locations have already been announced but the Port Macquarie date has not yet been announced. WICEN will be providing the communications for the Port Macquarie event when it is held.

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

### VK2BOR Club Station

After the ORARC Field Day 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 11<sup>th</sup> and 12<sup>th</sup> of August 2018

The 21<sup>st</sup> annual International Lighthouse and Lightship Weekend which takes place on the weekend of Saturday and Sunday the 18<sup>th</sup> and 19<sup>th</sup> of August 2018.

The Scouts and Guides 61<sup>st</sup> annual Jamboree on the Air (JOTA) which takes place on Saturday and Sunday the 20<sup>th</sup> and 21<sup>st</sup> of October 2018.

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

### Welcome to New Members

It is with pleasure that we welcome two new members, Sandy Brucesmith VK2WH and Colin Wall VK2JC.

Sandy VK2WH has bought a house near Transit Hill in Port Macquarie. Many of us have known Sandy for a long time. He held the callsign VK2AD for many years before moving to New Zealand some years ago. Sandy and his wife Kay have moved to Port Macquarie to be near their son.

Colin VK2WH is a retired dental surgeon and cranio-facial surgeon who now lives in Wauchope. He was the Executive Director of the Australian Dental Association from 1974 until 1993.

Henry Lundell VK2ZHE  
President

**Oxley Region Amateur Radio Club Inc**  
**Port Macquarie NSW**

**43rd Field Day 2018**

**Wauchope High School**  
**Nelson Street Wauchope**

Saturday and Sunday 9th & 10th of June (Long Weekend)

Doors open: Saturday at 9 am  
Sunday at 8 am

Website: <http://www.orarc.org/>  
Talk-in frequency 146.700 MHz (91.5 Hz CTCSS)

Station Callsign VK2BOR

Contact Field Day Co-ordinator: Henry Lundell VK2ZHE. Email: vk2bor@orarc.org

General Interest displays  
Trade & Treasure Saturday only  
Trade displays Sunday only  
Fox hunts Saturday & Sunday  
Home Brew Competition  
BBQ breakfast & lunch available  
Free coffee, tea & biscuits  
Soft drinks for sale.  
Entry only \$3.00

Field Day dinner Saturday night:  
Port Macquarie Golf Club (6 pm)

### Help Required Please

Mark VK2FMGM is asking for volunteers to help out with the club nets and in particular if there are any members who could assist in the Sunday morning net.

Would members who could provided assistance in running the club net please contact Mark VK2FMGM by his phone number in the members directory.

## A Musso's Greatest Nightmare

Contributed by Jim VK2VIV

It all started when I decided to upgrade my small Roland practice guitar amplifier. The amp is powered by internal 1.5 volt alkaline batteries, six in total giving 9 volts. Great little amp, but batteries do run out so I decided to purchase a plug in power supply.

Onto ebay and a \$39 switchmode power pack was ordered, a 9 volt centre pin negative and the outer is the positive. The add on ebay stated it was suitable for my small Roland amp. Well someone was telling porkies, the loud hum coming from the speaker was not supposed to be there. John Vk2AYQ offered a Roland power supply to prove if it was the cheaper switchmode power pack or some other source of 50 cycle infiltrating my gear. Well mixed results, the hum not as bad but apparent, at other times the hum disappeared altogether.



*Roland plug in power supply*

On to Mr. Google and researched the problem and it seems I wasn't the only one ever to suffer the dreaded speaker hum. Was it an earth problem, ground loop or just body capacitance. Stories of guitarists seeking solutions were varied and in most cases not resulting in a satisfactory result.

What should I do, build a better 9 volt power supply with better filters or just put up with the hum. After more sleepless

nights I decided to shelve the power pack idea and look into an external rechargeable battery pack. This then posed the question do I use eight 1.2 volt batteries giving 9.6 volt and hope the extra 0.6 volts does not cause a problem or drop the voltage with a resistor, zenner or regulator.

I again turned to Mr. Google and found some 1.5 volt Li-Po AA rechargeable batteries also some 1.5 volt AA Lithium rechargeable batteries. These would fit inside the amplifier replacing the six 1.5 volt alkaline batteries.

Have I solved the problem or introducing another problem? At least I will be totally portable and with the greater capacity of the rechargeable batteries I can use the amplifier for longer and charge the batteries before they actually run out!

But which batteries Li-Po or Lithium?

Jim Neil VK2VIV

Editor's note: If any fellow members have any ideas or advice on this matter please contact Jim either by email or the members Directory. This could also form the basis of a future Oxtales story!



### WIA Matters

#### WIA meets with ACMA

Date : 27 / 04 / 2018

Author : WIA Board

The WIA meets regularly with the ACMA to ensure it

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maintains an excellent working relationship.

This took place recently and the following is a brief summary of some of the key topics discussed:

#### ***New Legislation and Arrangements:***

- The ACMA is deep into consultation and implementation of the new Radiocommunications Bill. A large number of amendments are currently being incorporated and will go out for another round of consultations
- The WIA expressed concern about the ACMA being under-funded and under-resourced
- The ACMA will be seeking tenders for the provision services. Discussion was held about the Deed Transition Out Plan including records management arrangements

#### ***Emerging Threat:***

- The WIA expressed concern to the ACMA about WRC 9.1.6 agenda item – Wireless Power Transfer (WPT) because of the potential of harmonics and intermods from high powered WPT systems in close proximity to suburban environment. This was presented at the recent Asia Pacific Telecommunity Group WRC Preparatory meeting in Perth. The ACMA welcomed the WIA engagement in the dialogue on this issue

#### ***Conditions and Assessment:***

- The WIA outlined the progress on the LCD submission and the ACMA appreciated being kept up to date and is looking forward to receiving the submission
- The WIA also outlined that there is a body of work being undertaken to identify

the implications on the assessment syllabus in light of the LCD submission

- The ACMA agreed to place the syllabus review as a standing agenda item
- Once the WIA makes the LCD submission the ACMA agreed to keep the WIA informed of progress

#### ***Reporting:***

- The WIA and ACMA also discussed financial reporting deadlines not aligning with ASIC requirements and the issues this creates. Agreement was reached on sharing exposure drafts to overcome these issues leading up to audited accounts being available
- Progress reports were provided on the assessment, complaints and performance reporting
- The ACMA has committed to keeping the WIA informed of key elements and requirements with the introduction of the new RadComm Bill, Deed changes and spectrum roadmaps

#### ***Continuous Improvement:***

- The WIA discussed the streamlining of the assessment process and making it an on-line process. There was a progress report presented with over 350 people participating. The ACMA requested updates as the trial progresses
- The WIA requested a progress update on the ACMA to clarify current requirements for the WIA to manage information captured whilst conducting ACMA business. Particular focus is on third party Software as a Service and Infrastructure as a Service providers
- The WIA outlined that it was instituting Terms of Reference, Position descriptions, Policies, Procedures

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Continued from previous page and Plans to overcome the organisational

memory loss in 2017

- The WIA defined how it is making the organisation more sustainable with a longer term focus including a high level of provisioning for future needs in the 2018 budget.

## WIA Board Elections 2018

Date : 19 / 04 / 2018

Author : John Marshall - WIA Returning Officer



Three positions on the WIA Board will be vacated at this years AGM on May 19. The vacancies were created by the retirement of David VK4MZ, Brian VK2GCE and Phil VK2ASD. The retiring members were eligible to renominate.

### Election Results

I, John Marshall, the returning officer of the Wireless Institute of Australia declare that only 2 nominations were received, namely:

- Aidan Mountford - VK4APM
- Brian Clarke - VK2GCE

Therefore no election was required to be held and the two nominees have been elected unopposed to the board of the WIA

for a period of 2 years from the date of the next AGM, 20 May 2018.

One position on the board remains unfilled.

John Marshall

Returning Officer

WIA Election 2018.

Authorised for release by Peter Clee VK8ZZ, WIA Secretary.

## VI4GAMES on the Air



Date : 16 / 04 / 2018

Author : Robert Broomhead - VK3DN

Whilst the Commonwealth games have drawn to a close, making contact with the special event station VI4GAMES is still possible right up until the 31st of May when the licence issued buy the ACMA expires. The callsign has so far been on the air for 160 hours and has logged over 500 contacts. Don't miss out on your opportunity to work this special event station and to receive the very attractive commemorative QSL card.

Further details are available via the Gold Coast Amateur Radio Society club web page.

## Blast from the Past

This month's Blast from the Past is taken from the March 2013 Oxtales.

Henry VK2ZHE was both the President and Secretary that year, sounds familiar?

The main club activities reported upon were the John Moyle Memorial Field Day, New Regulations for Antenna Masts, a most informative talk given by Bruce VK2EM and sadly the passing of club member Neil VK2EI.

Part of the comment on Bruce's talk appears below:



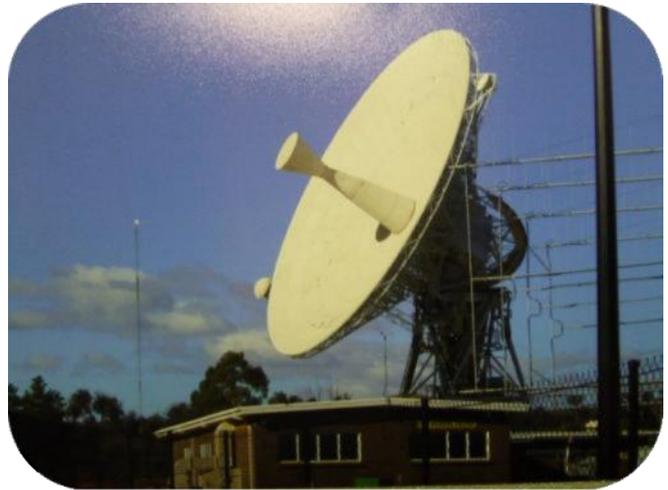
*Bruce VK2EM*

*Thank you to Bruce Ekert VK2EM for the excellent talk he presented at the ORARC April Monthly General Meeting on the 6th of April 2013. Bruce spoke on Australia's contribution to the Apollo 11 Moon landing mission, and importantly*

*on how the television pictures of those famous first steps on the Moon were actually received.*

*The pictures came via Honeysuckle Creek near Canberra until the Moon rose above the horizon at Parkes and they were able to receive the signal. The au-*

*dience was treated to a most interesting collection of photographs taken at the Honeysuckle Creek tracking station which no longer exists. Fortunately, its main dish lives on at Tidbinbilla. Arthur Monck VK2ATM made a video of Bruce's talk and anyone who missed the talk should see Arthur in order to obtain a copy.*



*The receiving dish Honeysuckle Creek*



*Neil VK2EI (Silent Key) and Bruce VK2EM at the site of former Honeysuckle Creek tracking station. Unbeknown to Bruce, Neil was also working on the tracking project.*

*At the May Monthly General Meeting on the 4th of May 2013, Bruce Ekert is presenting his long awaited lecture and demonstration of his 10GHz spectrum analyser. This innovative spectrum analyser uses a ku band LNB feeding into a USB TV dongle plugged into a PC running SDR Sharp. Arthur Monck VK2ATM will*

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*make a video of Bruce's spectrum analyzer talk and anyone who missed the talk should see Arthur in order to obtain a copy.'*

The following photographs outline the activities from John Moyle Memorial Field day from the same May Oxtales 2013 issue.

The editor has purposely left out some of the names and call signs on the photographs below to challenge our current memories!

*'The John Moyle Memorial Field Day was held at the Port Macquarie was held at the Port Macquarie Off Creek Storage Dam on Saturday the 16th of March 2013 at Rosendahl Reserve'*



*An Army marches on its stomach and ORARC operates on its famous sausage Sizzles!*

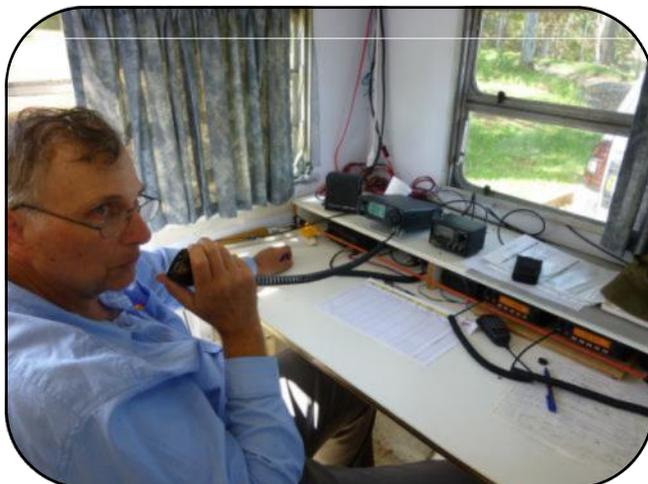
*Who were the cooks on that day. A clue is that one of them now has a new callsign today.*



*VK2BOR operators HF. Can you name them?*



*Another set of Operators*



*No prizes for guessing who this is.*



*The day was well supported by many members of the club. Who are these fine fellows around the table?*

## Equipment from the Past

### Yaesu FT-2500M

#### VHF FM Transceiver



The Yaesu FT-2500M FM VHF 2-m Transceiver was first manufactured in the early 1990's. The sets were advertised as being "Military Specification Approved". The transceiver was very well built and considered to be very reliable and rugged and especially suited to use in a mobile environment.

Many amateurs operated the FT-2500 trouble free in a mobile environment for more than 15 years. The operating controls had a rubberised coating which produced a pleasing tactile feeling during operation.

In 2013 the second hand price of these radios were about \$250. In fact one was advertised for sale in the 2013 Edition of the May Oxtales. These radio's are sometimes seen on ebay for around \$85 US.

Frequency range was 140 to 174 MHz receive and 144 to 148 MHz on transmit.

Modulation was FM only with 3 set power outputs of High 50 Watts, Medium 20 watts and Low 5 Watts into a 50 ohm impedance load.

Electrical requirements were 13.8 Volts DC and the manufacturers recommendation was to power from a fuse block close to the vehicle battery especially for high power operation.

The radio had 31 programmable memories and each memory could have a 4 character alpha code name.

Dimensions of the radio were 160 mm width, 50 mm high and 180 mm deep. Weight was 1.5 kg.

A feature of the microphone was that the buttons were back light that gave the microphone a "glow in the dark" appearance.

Although the specifications compared with today appear to be rather limited the set had great appeal to amateurs who wanted a no frills easy to operate, rugged and reliable radio to install especially into 4WD vehicles.

Yaesu updated the FT-2500M by releasing the FT-2600M with high power increased to 60 watts and the number of memories expanded to 170 with two pairs of sub-band memories and an instant recall of the home memory.

CTCSS encode/decode were built in with a data jack for use with packet radio using an optional TNC. In addition the display would indicate the available supply voltage for a second when first switched on.

The supplied hand mic included three programmable keys and could also be use for direct frequency entry. The radio was also PC programmable using an optional programming kit.

The set was still advertised as being up to a military standard for ruggedness. The front panel was revised as can be seen in the photograph below.

