



# OXTALES

First published 1980

Club Nets on VK2RPM  
146.700MHz  
(CTCSS 91.5Hz)  
Sundays  
(during EADST at 0900)  
(during EAST at 0830)  
Every Thursday at 1930

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>

ORARC's Forty-sixth Anniversary Year

## March 2017

Compiled by VK2AYQ & VK2TT

|                          |        |           |
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### President's Report

March 2017

### President's Report

John Moyle Memorial  
Field Day 18 & 19 March  
2017



The next Amateur Radio event on the ORARC calendar is the John Moyle Memorial Field Day which commences at noon on Saturday the 18<sup>th</sup> of March and finishes at one minute to noon on Sunday the 19<sup>th</sup> of March 2017. The ORARC callsign VK2BOR will be active from the club communications caravan on Saturday the 18<sup>th</sup> of March. The caravan will be located in the carpark of Sancrox Reserve.

Participants in the John Moyle Field Day will not go hungry. On the Saturday morning there will be a bacon and egg breakfast from the barbeque followed by a sausage sizzle lunch and dinner. Tea, coffee and soft drinks will be available from the caravan.

Sancrox Reserve can be reached via either

Cont'd on Page 3

## 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

### In This Issue :

| Item                                  | Page No     |
|---------------------------------------|-------------|
| President's Monthly Report            | Front Cover |
| Down the Coax                         | 2           |
| E-Mail Directory                      | 2           |
| Net Controllers' Roster               | 2           |
| Summer UHF VHF Field Day              | 3           |
| Antenna Shoot Out                     | 6           |
| Central Coast Field Day               | 9           |
| Six Metre Repeater Duplex             | 10          |
| Repeater News                         | 12          |
| Old Fire Station Site                 | 13          |
| WICEN local branch established        | 13          |
| Antenna Shoot Out Results             | 15          |
| Central Coast Field Day. A reflection | 16          |
| Blast from the Past                   | 18          |
| Vale Roy VK2EJB                       | 19          |
| Member Register                       | 20          |

## **Down the Coax**

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

**Monthly General Meeting  
Saturday 4 March 2017 2:00 pm**

**Sydney Amateur Radio Ferry Contest  
Sunday 12 March 2017 10am – 4pm**

**Friday Night Get-Together  
Friday 17 March 2017 7.00 pm**

**John Moyle Memorial Field Day Saturday 18  
& Sunday 19 March 2017 Sancrox Reserve**

**Monthly General Meeting  
Saturday 1 April 2017 2:00 pm**

**Urunga Convention  
Saturday 15 and Sunday 16 April 2017**

**Friday Night Get-Together  
Friday 21 April 2017 7.00 pm**

**ANZAC Day AX prefix permitted by ACMA  
Tuesday 25 April 2017**

**Monthly General Meeting  
Saturday 6 May 2017 2:00 pm**

**World Telecommunications Day  
Wednesday 17 May 2017. AX prefix permitted**

**Friday Night Get-Together  
Friday 19 May 2017 7.00 pm**

**Monthly General Meeting  
Saturday 3 June 2017 2:00 pm**

**ORARC Field Day  
Saturday 10 and Sunday 11 June 2017  
Tacking Point Surf Club Hall**

**Field Day Dinner Port Macquarie Golf Club  
Saturday Night**

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

**Sundays  
(0900 Local)**

**Thursdays  
(1930 Local)**

### **March 2017**

|         |          |        |          |
|---------|----------|--------|----------|
| VK2TT   | Mar - 05 | VK2EM  | Mar - 02 |
| VK2FMGM | Mar - 12 | VK2ZHE | Mar - 09 |
| VK2CHC  | Mar - 19 | VK2ICQ | Mar - 16 |
| VK2TT   | Mar - 26 | VK2EM  | Mar - 23 |
|         |          | VK2ZHE | Mar - 30 |

### **April 2017**

|         |          |        |          |
|---------|----------|--------|----------|
| VK2FMGM | Apr - 02 | VK2ICQ | Apr - 06 |
| VK2CHC  | Apr - 09 | VK2EM  | Apr - 13 |
| VK2TT   | Apr - 16 | VK2ZHE | Apr - 20 |
| VK2FMGM | Apr - 23 | VK2ICQ | Apr - 27 |
| VK2TT   | Apr - 30 |        |          |

### **May 2017**

|         |          |        |          |
|---------|----------|--------|----------|
| VK2FMGM | May - 07 | VK2EM  | May - 04 |
| VK2CHC  | May - 14 | VK2ZHE | May - 11 |
| VK2TT   | May - 21 | VK2ICQ | May - 18 |
| VK2FMGM | May - 28 | VK2EM  | May - 25 |

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*(Cont'd from front cover)*

Rawdon Island Road by turning off the Oxley Highway at the top of Spencers Cutting, or via Sancrox Road by turning off the Pacific Highway at Expressway Spares.

For more information on the John Moyle Memorial Field Day visit <http://www.wia.org.au/members/contests/johnmoyle/>

### **Urunga Convention 15 & 16 April 2017 Easter Weekend**

The Urunga Convention runs over the Easter Weekend on Saturday the 15<sup>th</sup> and Sunday the 16<sup>th</sup> of April 2017 at the Senior Citizens' Hall in Bowra Street. ORARC club members are always well represented at this event. If you are staying overnight don't forget the Field Day dinner at the Urunga Bowling Club on the Saturday evening. The fox hunting is always keenly contested but there is always plenty of opportunity for a quiet eyeball in the comfort of the hall and surrounds. Regardless of whether you are in Urunga or not, please come on air between 9 am and 9:30 am on Sunday morning to participate in the famous Urunga Scramble – any power, any frequency, any location – highest number of contacts in the 30 minutes wins! Visit <http://users.tpg.com.au/goldy2/> for the field day program and information.

### **ORARC 2017 Field Day 10 & 11 June Queens Birthday Weekend**

Don't forget to mark your calendars for Saturday and Sunday the 10<sup>th</sup> and 11<sup>th</sup> of June for the ORARC Field Day over the 2017 Queens Birthday Weekend.

The Field Day dinner as usual will be at 6pm at the Port Macquarie Golf Club on Saturday the 10<sup>th</sup> of June.

Radio Supply of Bellingen will have a

large range of accessories and other items at their stand at Port Macquarie.

It was with some sadness that VK4ICE Communications from Brisbane sold off the remaining stock at Wyong after having made the difficult decision to close this very popular business. David Tavener VK4ICE will still be attending the ORARC 2017 Field Day, but this time as a visitor able to participate in the Field Day activities. David has promised to donate a substantial prize to the Field Day. Wayne Love VK4WC who normally assists David with his stand also hopes to attend as a visitor. We look forward to welcoming both David and Wayne to the Field Day.

Roda Antennas are unable to attend the 2017 Field Day due to other commitments but they have promised to attend in 2018.

We are hopeful that Andrews Communications will attend this year.

ALARA will be attending the Field Day again this year.

The successful running of Field Day weekend is dependent upon the efforts of many members to undertake the myriad of tasks that are required. Please help where you are able. This will spread the work load so that everyone has time to enjoy the weekend.

### **Recent Events**

#### **Summer VHF/UHF Field Day Saturday 14<sup>th</sup> January 2017**

After the substantial VK2BOR score in the Spring VHF/UHF Field Day on the 26<sup>th</sup> of November 2016 when 6 metres opened, it was decided to again operate the club station VK2BOR from North Brother Mountain in the Summer VHF/UHF Field Day on Saturday the 14<sup>th</sup> of January 2017.

VK2BOR was set up in the configuration which worked well for the Spring VHF/UHF Field Day using two gazebos with the  
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6 and 2 metre and 70 centimetre antennas all mounted on the trailer mounted mast loaned by Station Manager Lyle Smith VK2SMI. The 6 metre station was set up in one gazebo and the 2 metre and 70 centimetre station was set up in the second gazebo. Thank you to Lyle Smith VK2SMI and to Keith Bayliss VK2FPTL for loaning the two gazebos for the event.



*The two gazebos together made a large operating space for the stations.*

*Above Ray VK2JU, Keith VK2FPTL and Dave VK2AYD and below Paul VK2ICQ, Larry VK2CLL and Lyle VK2SMI*



*A double station in one case*

*2 meters and 70 cm.*

North Brother Mountain is well elevated with excellent clear coastal paths to both the north and the south. The antennas all worked well but sadly, the hoped for 6 metre opening didn't materialize and no DX stations were heard on either 2 metres or 70 centimetres. As a result, VK2BOR did not have a score to submit.



*North Brothers magnificent views even in the wet. Below an intrepid group that includes Dave VK2AYD and Dennis VK2DAM with VK2FPDC family brave the wet.*



The day was still a great success with an excellent attendance and plenty of opportunity for socializing. Thank you to Bob Ecclestone VK2ZRE for running the barbeque to produce a delicious substantial bacon and egg breakfast and a sausage sizzle lunch. No one went hungry.

Those attending included VK2SMI, VK2FPTL, VK2ZRE and Diana, VK2DAM, VK2JU, VK2ATM, VK2FIJN  
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VK2FBOB, VK2CLL, VK2ICQ, VK2FPDC and harmonics, VK2ZHE, VK2KC and VK2AYD.



Bob VK2ZRE cooking up a storm watched by Dennis VK2DAM with Bob VK2FBOB gives some pointers!

The day started out with a fine morning but towards mid-day the clouds started to build. The forecast of thunderstorms and rain proved to be correct. However, the noon thunderstorm moved through quite quickly with only a modest rain squall on the mountain. Everyone stayed dry under the shelter of the gazebos and the covered picnic tables. Arthur Monck VK2ATM decided to head homewards on his motorcycle before the storm reached the mountain but the storm moved northwards too quickly and he had to endure heavy rain and light hail at the bottom of the mountain. The sun then returned until it was sensed that more thunderstorms were approaching later in the afternoon. The hint was taken promptly and everything was packed up in record time while it was still dry. The rain started just as everyone departed.



Enjoying a break Diana, Ray VK2JU, Bob VK2ZRE, Dennis VK2DAM and Bob VK2FBOB



A great day for socializing with Mark Anderson from SES and family

Harmonics enjoying the fresh air



Another station in a case by Lyle VK2SMI



What a fine band of operators Paul VK2ICQ, Lyle VK2SMI, Larry VK2CLL and Ivan VK2FIJN



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## Antenna Shootout Sunday 12<sup>th</sup> February 2017



*The club's caravan with the VHF and UHF receiving antennas. With Barry VK2LBG and Arthur VK2ATM setting up.*



*The range*



*Transmitting site*

The ORARC annual Antenna Shootout took place at the Tuffins Lane sportsfields in Port Macquarie on Sunday the 12<sup>th</sup> of February 2017. Normally informal foxhunts are run during the Antenna Shootout day but this year the day was far too hot for foxhunting. In fact, the forecast of the temperature exceeding 30 degrees Celsius, caused the Committee to consider postponing the Shootout. However, it was decided to proceed with the shootout only. Plenty of chilled water and soft drinks were provided and adequate shade was available at both ends of the antenna range, and at the covered picnic tables used for the barbeque bacon and egg breakfast and sausage sizzle lunch.

During the shootout the temperature was in the mid 30s with the nor'east sea breeze helping to keep conditions quite comfortable in the shade. Just as we were about to leave the site the wind swung to the nor'west and the wind felt like a dragon's breath. The Automatic Weather Station (AWS) at the airport only a few hundred metres from Tuffins Lane recorded 46.6 degrees Celsius which is a new record for Port Macquarie.

Thank you to Barry Gilson VK2LBG for towing the club's Communications Caravan to and from the Tuffins Lane site. Thank you also to the members who arrived early to set up the caravan in the carpark. The caravan annexe provided excellent shade while the interior of the caravan was kept quite comfortable with the aid of the electric fan. As in past years, Arthur Monck VK2ATM brought along his spectrum analyser to make the received signal strength measurements. The VHF and UHF receiving antennas made by John McLean VK2KC were set up and connected to the spectrum analyser. John VK2KC was unable to attend the shootout but he checked the antennas and ran through the setting up procedure with several members at the Wednesday working bee before the shootout.

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The Honda inverter generator which Arthur Monck VK2ATM had recently donated to the club ran faultlessly throughout the day without any distress from high air temperature. The new generator fits nicely under the portable generator shelter that Lyle Smith VK2SMI had made for the club's old generator. The shelter ensures that the generator operates in shade and it further attenuates the acoustic noise from the generator. The inverter generator is already very quiet and when operating under the shelter it can't be heard at all in the caravan.



The transmitting site was set up at the far end of the sportsfields. Thank you to Lyle Smith VK2SMI for bringing his gazebo for shade and for running the transmitting site which involved setting up the reference VHF and UHF antennas and then setting up each antenna that had been offered for testing in order for the measurements of gain relative to a dipole to be made. Thank you to Larry Lindsay VK2CLL for assisting Lyle in all these tasks.



*Larry VK2CLL, Ray VK2JU and Lyle VK2SMI at the transmitter site.*

Again, the tripod mast and reference antennas were provided by John McLean VK2KC. Thank you, John.



*Antennas being set up for testing.*



The tabulated test results of the antenna measurements are included in this edition of Oxtales. There was intense interest in the results. Both Ivan VK2FIJN and Larry VK2CLL had built several antennas especially for the shootout with the aim of taking out the honour of the highest gains on 2 metres and 70 centimetres.

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On 2 metres in the directional category Ivan Southwell VK2FIJN was a clear victor with his 4 element yagi at 10dBd beating both the 4 element yagi of Paul Colledge VK2ICQ at 8dBd and the 5 element yagi made by Larry Lindsay VK2CLL at 8dBd. In the 2 metre omnidirectional category the flowerpot antenna made by Lyle Smith VK2SMI tied with the J Pole antenna made by Ivan VK2FIJN at 3dBd each. Ivan's five eights wavelength ground plane and his flowerpot antenna were only fractions of a dB behind in gain.

On 70 centimetres in the directional category, the ancient 4 element yagi made by Henry Lundell VK2ZHE in 1969 won with a measured gain of 5.5 dBd. In the 70 centimetre omnidirectional category the Diamond X-50 base station submitted by Paul Colledge VK2ICQ won with a measured gain of 6dBd.

The Diamond X-50 dual band base station antenna was the only commercially made antenna that fully lived up to its published specifications on both 2 metres and 70 centimetres. This is comforting as the ORARC 2 metre and 70 centimetre repeaters at both Middle Brother Mountain and Telegraph Point use the Diamond X-50. The Nagoya dual band mobile whip submitted by Craig Martin VK2ZCM was to specification on 2 metres but a little down on 70 centimetres. It was very pleasing to see the great number of home-made antennas submitted this year.

Those participating in the shootout included VK2LBG, VK2ATM, VK2SMI, VK2CLL, VK2VIV, VK2FMGM, VK2FIJN, VK2MPK, VK2ZHE, VK2CRF, VK2ICQ, VK2ZCM, VK2AYD, VK2UPR, VK2JU, VK2DAM, AND VK2ZRE.

Richard Court VK2CHC had volunteered to run the barbeque but he was unable to attend the shootout as he was admitted for emergency surgery for a hernia before the weekend. Commiserations to Richard but he is recovering well. Thank you to Jim Neil VK2VIV for stepping in to take



*Arthur VK2ATM with the spectrum anyalyser at the receiving end being assisted by Bob VK2ZRE and Barry VK2LBG*

Richard's place. Jim assisted by Barry Gilson VK2LBG set up the barbeque and produced a delicious bacon and egg breakfast and an excellent sausage sizzle lunch. No-one went hungry and the covered picnic tables meant that everyone could eat sitting down under very welcome shade. All records were broken in consumption of cool drinks during the weekend.



*Coping with the heat and even enjoying the cricket put on especially for the event! Top Peter VK2MPK, Barry VK2LBG, Jim VK2VIV Mark VK2FMGM and Denis VK2DAM.*



*Ray VK2JU and Paul VK2UPR enjoy a talk chat.*

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## Central Coast Field Day at Wyong

This year was the 60<sup>th</sup> Central Coast Field Day held at Wyong Racecourse on Sunday the 26<sup>th</sup> of February 2017. There was heavy rain forecast for the event but despite many travelers encountering heavy rain showers on the way to Wyong, the weather at the racecourse remained fine all day for the Field Day. Unfortunately, the unfavourable forecast deterred some of the usual visitors from attending this year so the attendance was a little smaller than expected. This was most noticeable in the flea market area as there were fewer sellers than usual. However, those sellers to did attend had less competition. There were many bargains to be had and no-one went home empty handed unless they had exceptionally strong willpower.



*Local trader Radio Supply from Bellingen Gary VK2ZKT and XYL Carol VK2FCSR*



*Familiar faces at the Flea Market, Bruce VK2EM with XYL Yulia*

As usual, a great number of ORARC members made the journey to the Field Day. Those members who wore their club Tee shirts and hats were very easy to spot in the crowd. I counted at least 16 members during the course of the day.



*Denis VK2DAM and Paul VK2ICQ check out the merchandise*

With some of the major traders absent, those traders who did attend reported brisk business. This year model traders offering quadcopters and submarines made their debut and created a lot of interest. Traders included VK4ICE, Roda Antennas, FPV, Radio Supply Limited, RF Solutions, Cro-tek Instruments, TET-Emtron, Spark CC, Duro Services and Oatley Electronics.



*Model submarines radio controlled. (Editor wonders how they are tracked when out of sight submerged.)*

As well as the flea market and the commercial traders there were many interesting stands set up by groups such as WICEN,  
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Central Coast VRA, Westlakes Amateur Radio Club - QSL Bureau, Kurrajong Radio Museum, Military Collection, Tube Radio Australia, ARNSW Home Brew and Experimenters Group, Over 50s Radio, Rotarians of Amateur Radio, AMSAT, ALARA and the WIA. The TV Vision truck created a lot of interest when it raised its impressive mast. The Rotarians of Amateur Radio ran a live HF station from their stand.



The various very interesting lectures and seminars throughout the day were very well attended. Both the Lectures and the Topics in a Nutshell ran concurrently back to back so that at any one time during the day there were two to choose from. There was something for everyone!

The raffle had particularly desirable prizes this year and tickets sold briskly.

This year most Field Day announcements were made on 147.125 MHz which kept the wide area Public Address announcements to a minimum.

I wonder how many people can say that they visited all the flea market stands, all the traders and all the exhibitors during the course of the day after engaging in the countless eyeball QSOs that are a hallmark of Wyong Field Days. A thoroughly enjoyable day.

### **Working Bees – 6 Metre Repeater Duplexer Construction**

In the January 2017 issue of Oxtales there was a brief summary of the work that had been completed in construction of the antenna duplexer for the Telegraph Point VK2RCN 6 metre repeater. This repeater will transmit on 53.800 MHz and receive on 52.800 MHz.

As described in the January 2017 issue, the duplexer consists of four full size quarter wave coaxial resonators (“Cavity Filters”) in a band pass - band reject configuration with two filters in the transmit leg and two filters in the receive leg. This enables the repeater to transmit and receive simultaneously on a single antenna.

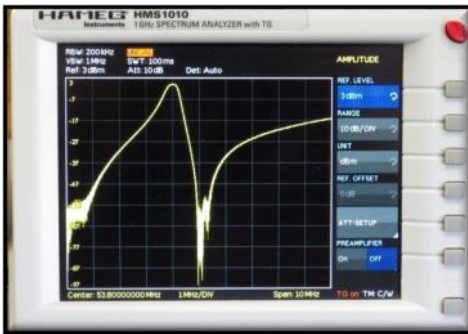
The secret behind the operation of the band pass - band reject duplexer lies in the use of interconnecting electrical quarter wavelength coaxial cables to transform short circuits to open circuits and vice versa. In order to achieve the high isolation that is possible with this configuration it essential to use double screened coaxial cable. The VK2RCN duplexer uses RG-223 coaxial cable which outwardly looks similar to RG-58 but has much superior shielding characteristics. Similarly, the resonator coupling loops and notch tuning capacitors must have very low loss. This has been achieved by making the loops from substantial copper strap and using low loss ceramic variable capacitors mounted in diecast aluminium boxes with N type coaxial adaptor connections to the loops.

Once all the hardware was completed, the individual filters were separately tuned for  
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the appropriate band pass and band reject (notch) frequencies. This was done using a spectrum analyser with an inbuilt tracking generator. Thank you to Arthur Monck VK2ATM for bringing his spectrum analyser to several working bees and setting it up to make the various measurements during this phase of the project. During the tuning of the notches it turned out that two of the coupling loops had to be remade in order to optimize both the depth and adjustment range of the rejection notches. The photos show the tuning being carried out.



Lyle VK2SMI Rob VK2CRF and Arthur VK2ATM tuning the cavities.



When it became clear that two of the coupling loops were too short it was found that no more copper strap was available to

make two longer loops. There is always a solution to such dilemmas. The wall thickness of standard 12 mm copper tubing was found to be the same as the thickness of the copper strap that had been used to make the other coupling loops. After making a single longitudinal hacksaw cut along a suitable length of tubing it was easy to open the tubing out. A little judicious panel beating with a mallet on a wooden block produced a flat strip that was easily guillotined to produce the two 10 mm wide strips to make the new coupling loops.



Arthur VK2ATM assembling the cavities

Note that the band pass frequency is adjusted by physically moving the heavy coaxial tube in and out of the top of the resonators until the coaxial line inside the resonator is exactly a quarter of a wavelength. This requires significant manual dexterity as the overall length of the tube is approximately 2 metres and the adjustment requires approximately 1.5 metres of tube to be inside the resonator body. Hence the half a metre or so of tube projecting above the top of the resonators. The tube is held in position with a simple split clamp which is part of the cast aluminium top of the resonators.

There is provision for fine tuning of the band pass frequency using a threaded solid aluminium plug which can be fitted to one of three threaded locations on the side of each resonator. When the threaded plug is screwed inwards it  
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increases the capacitance to the centre coaxial tube and thus lowers the resonant frequency. The increased capacitance is more effective when applied nearer to the open end of the centre coaxial tube. Hence the choice of three positions for the threaded plug. The two unused threaded holes in the resonator are plugged with threaded blank caps.

In order to adjust the solid aluminium plugs to fine tune the resonant frequency of the resonators a pin spanner is required. The outside end of the plugs simply have two holes to take a pin spanner. Again, the club is indebted to John McLean VK2KC for custom fabricating a pin adaptor to accept a standard half inch square drive tool. The adaptor has a hexagonal section so that it is possible to use a spanner in lieu of the half inch square drive. Thank you, John.

The photos show the complete duplexer with the interconnecting cables connected. The fine tuning of the band pass and band reject frequencies of the transmit and receive halves of the duplexer can be seen. Only very small adjustments were required in order to optimize the depth of the band reject notches. Very little change was seen in the band pass frequencies when the interconnecting cables were attached.



*Arthur VK2ATM, Lyle VK2SMI and Rob VK2CRF contemplate a job well done.*

The band pass loss on both the transmit and receive frequencies was approximately 1.5 dB. The transmit to receive isolation

measured between transmit and receive and between receive and transmit frequencies was approximately 90 dB. These figures are every bit as good as the published specifications of commercially manufactured duplexers.

The final task required in order to compete the duplexer in readiness for installation is a plinth and clamping frame. The plinth is necessary in order to position the filters, and to raise the bottoms of the filters so that they are not in contact with the floor. The upper clamping frame is to hold the tops of the filters in place to prevent the filters intermittently touching each. Additionally, with the four filters sitting on the plinth with their tops clamped, the duplexer assembly becomes much more mechanically stable and is unlikely to be toppled over. This is important as the combined weight of the four filters is substantial. Each individual filter requires two people to lift it! The photos of the completed plinth and clamping frame will appear in the next issue of Oxtales.

Detailed notes were kept during the construction of the duplexer. Thank you to the many members who contributed to this interesting project. The duplexer is essential as it provides the isolation between the transmitter and receiver of the 6 metre repeater and allows the repeater to transmit and receive on a single antenna.

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

As has previously been mentioned, the radio link site on Middle Brother Mountain at which the VK2RPM repeaters are located is now owned by TPG Telecommunications. The interference that has been reducing the sensitivity of the VK2RPM 146.7 MHz two metre repeater is a problem. It is hoped that the planned site upgrade works will reduce this problem.

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## Telegraph Point VK2RCN Repeater Site

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. In addition, there is a possibility that an FM broadcast transmission site may be established in the vicinity of the repeater site. Once these matters are resolved it is hoped to expedite the planned work.

## Old Fire Station – Hay St, Port Macquarie



As many members will be aware, the old Fire Station in Hay Street, Port Macquarie, has been vacant since Fire and Rescue relocated to the new Fire Station in Central Road, Port Macquarie, next door to SES. A number of ORARC members expressed interest in the possibility that ORARC could make use of the building. To that end, ex Councillor Ray Cooper addressed the February ORARC meeting regarding the strategy to be used in pursuing such sites. He offered advice and mentoring and provided a list of points to address. Ray is well credentialed in that he recently successfully led the retention of the stationmaster's cottage at Wauchope.

At the ORARC February 2017 meeting a sub-committee was formed to investigate the options regarding the old Fire Station. Those elected were Barry Gilson VK2LBG, Steve Wynn VK2ZSW, Paul Romaine VK2UPR,

Paul Jones VK2DEL, Charles Edmondson VK2KCE and Jim Neil VK2VIV.

At the March 2017 ORARC meeting Jim Neil VK2VIV provided an interim report on the sub-committee's investigations up to the 20th of February 2017. The report listed points which had been considered, and possible logistics to be explored. Concern was expressed regarding how the ongoing expenses of utilizing the building could be funded. The magnitude of possible expenses had not yet been determined.

Hopefully, by the April 2017 meeting there will be a clearer view of the feasibility or otherwise of taking the matter further.

## WICEN (NSW) Mid North Coast Group Formed



After the conclusion of the ORARC February 2017 Monthly General Meeting a meeting of local WICEN members convened by Steve Wynn VK2ZSW formally elected Steve to be the co-ordinator for the WICEN (NSW) Mid North Coast Group. Congratulations, Steve. In the past there had been an active local WICEN group but it lapsed some years ago. It's heartening to see the renewed interest. Anyone interested in joining WICEN should contact Steve.

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

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## Stop Press

Congratulations to Ivan Southwell VK2FIJN, Bob Small VK2FBOB and Steven Brown VK2VTH who all successfully passed their assessments for the Advanced Licence on Sunday the 5<sup>th</sup> of March 2017. Look for some new callsigns soon such as VK2IJS for Ivan and VK2BIG for Bob.

Thank you to club education officer Larry Lindsay VK2CLL for running the advanced licence classes each Friday night for many months leading up to the above assessments. Thank you to Ross Barlin VK2DVZ for coming to Port Macquarie to run the assessments with Larry. The next Foundation Licence training and assessment weekend will be held as soon as sufficient candidates register. At least a couple more ORARC members are still keen to upgrade to Advanced licences.

Henry Lundell VK2ZHE  
President



The following timely email was sent in by Bob VK2ZRE regarding the forth coming WIA elections at the end of March.

*“Dear fellow ORARC members. I am sure you are all aware there has been some debate about serious problems within the WIA Board in the last 12 months leading to the resignation of all Board members. I believe this was a very courageous move by those Board members who still had time to serve on the Board. This means the WIA*

*membership will have to elect all seven Board members this year instead of only the four whose current terms finish this year and who have offered themselves for re-election.*

*The new Board, whatever its composition, will take over at the WIA AGM at Hahndorf in May 2017.*

*I know some members have resigned their WIA membership recently and I know of others who haven't joined the WIA because of the perceived problems, now and in the past. I was one of those who thought the WIA was a bit of an "Old Boys Club" until someone pointed out to me why I should be a member.*

*I would like to suggest that those of us who are not WIA members seriously consider joining. Like it or not, the WIA represents Australian Amateurs to both the Australian Government through the ACMA and Internationally through the IARU.*

*I urge those of us who don't normally vote, to consider doing so, this year in particular and to look seriously at the real contributions individual candidates have made to the hobby.*

*I would also urge you all to do your own research. Remember, the people the membership vote in at this election will be making decisions on your behalf about your hobby.*

*Voting closes at the end of March. If we do not vote, we do not have the right to complain about what happens to our hobby in the future.*

*Regards...Bob Ecclestone VK2ZRE”*





# Results Antenna Shootout Sunday 12<sup>th</sup> February 2017

Sheet1

| 146.2 Mhz |          |                                |     |           |             |           |
|-----------|----------|--------------------------------|-----|-----------|-------------|-----------|
| Name      | Callsign | Antenna Type                   | H/V | Result Db | Net Gain Db | Corrected |
| ORARC     | VK2BOR   | Reference Dipole               | V   | -27       | 0           |           |
| Lyle      | VK2SMI   | Flower Pot                     | V   | -28       | -1          | 3         |
| Larry     | VK2CLL   | Flower Pot No 1                | V   | -30       | -3          | 1         |
| Larry     | VK2CLL   | Flower Pot No 2                | V   | -29       | -2          | 2         |
| Ivan      | VK2FIJN  | Flower Pot No 1                | V   | -28.5     | -1.5        | 2.5       |
| Ivan      | VK2FIJN  | Flower Pot No 2                | V   | -30       | -3          | 1         |
| Ivan      | VK2FIJN  | J Pole                         | V   | -28       | -1          | 3         |
| Ivan      | VK2FIJN  | Five Eight Ground Plane        | V   | -29.2     | -2.2        | 2.8       |
| Larry     | VK2CLL   | 5 El Yagi                      | V   | -24.5     | 2.5         | 6.5       |
| Larry     | VK2CLL   | 5 El Yagi 2 <sup>nd</sup> Test | V   | -23       | 4           | 8         |
| Ivan      | VK2FIJN  | 4 El Yagi                      | V   | -20.5     | 6.5         | 10.5      |
| ORARC     | VK2BOR   | Yagi                           | V   | -31       | -4          | 0         |
| ORARC     | VK2BOR   | Ref Dipole Side on             | V   | -31       | 4           | 0         |
| ORARC     | VK2BOR   | Ref Dipole In Line             | V   | -28       | 3           | 1         |
| Craig     | VK2ZCM   | Nagoya                         | V   | -30       | -3          | 1         |
| Paul      | VK2ICQ   | 4 El Yagi                      | V   | -20       | 7           | 8         |
| Paul      | VK2ICQ   | Diamond X50                    | V   | -27       | 0           | 2         |
| ORARC     | VK2BOR   | Ref Dipole Low Power           | V   | -37       |             |           |
| Paul      | VK2ICQ   | 4 El Yagi Sat L/P              | V   | -40       |             | -3        |
| Paul      | VK2ICQ   | 4 El Yagi Sat L/P              | H   | -54.5     |             | -18.5     |

| 433 Mhz |          |                            |     |         |          |
|---------|----------|----------------------------|-----|---------|----------|
| Name    | Callsign | Antenna Type               | H/V | Results | Net Gain |
| ORARC   | VK2BOR   | Reference Dipole           | V   | -41     | 0        |
| Henry   | VK2ZHE   | 4 El Yagi                  | V   | -35.5   | 5.5      |
| Craig   | VK2ZCM   | Nagoya                     | V   | -40     | 1        |
| Larry   | VK2CLL   | Flower Pot                 | V   | -44     | -3       |
| Craig   | VK2ZCM   | Dipole                     | V   | -46.5   | -5.5     |
| Craig   | VK2ZCM   | 4 El Yagi                  | V   | -40     | 1        |
| Craig   | VK2ZCM   | 4 El Yagi                  | H   | -56     | -15      |
| Craig   | VK2ZCM   | 4 El Yagi Reversed         | H   | -70     | -29      |
| Craig   | VK2ZCM   | 4 El Yagi Reversed         | V   | -64     | -23      |
| Paul    | VK2ICQ   | Diamond X50                | V   | -35     | 6        |
| Ivan    | VK2FIJN  | Flower Pot D/B             | V   | -46     | -5       |
| ORARC   | VK2BOR   | Reference Dipole Low Power | V   | -47     | 0        |
| Paul    | VK2ICQ   | 4 El Yagi Low Power        | V   | -48     | -1       |
| Paul    | VK2ICQ   | 4 El Yagi Low Power        | H   | -57     | -10      |



## **A Brief Look at The 2017 CCARC Wyong Field Day**

**By Bob VK2ZRE**

I had set my alarm for 5.30am on Sunday 26th February in a valiant attempt to get on the road for the three and a half hour trip to Wyong to arrive before everyone had left and gone home. I had checked the weather forecast for Wyong the night before and the prediction was for rain, anything up to 60mm. Great, I thought, shades of 2015. The last time I attended the CCARC Field Day, I got a bit damp.

I could hardly believe it was time to get up when the alarm on my phone battered my half-conscious senses into some semblance of reality. I fiddled about a bit trying to wake up, had a quick bite of breakfast, kissed my Dearly Beloved on the cheek and stumbled out the door around 6.45am. By the time I got to the Puma Service Centre at the Slim Dusty Interchange (doughnut) to enter the Pacific Highway, the rain had started.

Here we go I mused, the BOM was right again. And the further down the highway I drove, the harder the rain fell, until I seriously considered having to pull over around the Bago Road overpass. But being a bloke, I pushed on, albeit at a slightly slower pace until the incessant waterfall eased off to just being torrential rain. I drove in and out of rain for the next 2 and a bit hours but the trend was to generally lighter rain the further south I got. By the time I reached the Sparks Road turnoff on the M1, the sky ahead looked as though it might even be sunny over Wyong. And so it was, and I managed to find a parking spot about 50 metres from the front gate of the Wyong Race Club at about 10:15am.

I headed straight for the WICEN/VRA stand as I had missed them completely in 2015 because I had gone straight to the Lecture rooms and they had packed up and gone by the time I got outside again. I was greeted by

"and how is the poster boy?" and other similar friendly jibes, a reference to my press-ganged appearance on the Channel 7 News broadcast coverage of the VH-MDX SAREX last September.

Having ascertained that the VH-MDX SAREX was on for 2017, I briefly scanned some of the vendor's stalls as I headed for Lecture Room 2 for the first of the talks I had marked on the programme. This was to be my first and only look at the goodies on offer as I spent the rest of the day attending the excellent talk programme put on by the CCARC. I have realised you either go to the Wyong Field Day to buy stuff or to listen to talks. It is impossible to do both!

Ray Robinson (VK2NO) gave a very interesting talk on the development of the Command Set Blind Instrument Landing System (ILS) developed by American Bomber Aircrews stationed in Britain during WW2. It was referred to as "blind" because there was no visual indication of when the pilot was on the correct approach path, just a varying audio signal in his headset. Without some form of ILS, the American aircraft could not operate if it was predicted that the cloud ceiling would be below 500 feet when they were due to return and this situation was very common. The development of the ILS was very interesting as the standard Command receiver had three versions covering three HF bands, the highest of which was around 10MHz whilst the Blind Landing System (BLS) was around 33MHz. Quite a jump from 10MHz! This was when 30MHz was considered to be UHF! The aircrew and their support people modified standard Command receivers on-site as the Americans were developing their own ILS with a visual approach indication so they did not want to divert manufacturing resources in America into another system.

Bob Mutton (VK2ZRM) then gave a great talk on Single Board Computers (SBCs) with a special focus on the Raspberry Pi. Unlike the Arduino which runs a version of  
*(continued on next page)*



*(from previous page)*

compiled basic, the Pi runs a full blown derivative of the Debian Linux Operating System. Therefore, it can run multiple programmes concurrently, unlike the majority of other SBCs.

I then scooted off to the other lecture room where the VHF-UHF-Microwave and weak signal group had already started a general chit chat hosted by WIA board member Roger Harrison VK2ZRH. Many amateurs will remember Roger as the editor of Electronics Today International. Much discussion centred around contesting and the vexed question of Grid Square versus Distance scoring. What is your preference and why? An upgrade to the Foundation Licence conditions and band plan changes was next and the thorny question of a 1KW Advanced power limit. All in all, it was all good grist for the mill.

I was going to go to the talk by Steve Stebbing (VK2AAV) on "eBay Modules for experimentation" but apparently Steve was sick and did not make it on the day. Shame, Bob VK2ZRM had given it a pretty good wrap during his talk on SBCs as these all married together pretty well.

So it was off to the "HF related weather services" presented by Dr Vickal Kumar from BOM. This comes under the heading of Space Weather Services (SWS) now and incorporates what many amateurs previously knew as the IPS or Ionospheric Prediction Service. There are some very interesting new services offered and SWS are looking for feedback from users. I understand there are help pages on the website on how to use some of the new tools.

Next was Kevin Jardine (VK2KVJ) with his home brew modular spectrum analyser and vector network analyser (MSA/VNA). Boy, what a labour of love this is! The instrument is battery and mains operated, covers from about 10KHz to 3GHz, has a tracking gen-

erator and network vector analyser included, all for a total cost to date of about \$800. It uses a Windows laptop for control and display. So if you have the \$800 bucks, a pretty good junk box and a couple of years to spare, have a go yourself! Included in the DIY project is a great little pan brake for folding sheet metal from a design by Jim Tregellis VK5JST. I am thinking seriously of building the pan brake myself. Very handy little addition to the workshop. I built a small bender several years ago for a specific project on my motorhome, but it is nowhere near as versatile as Jim's design.

And finally to Bob Hudson VK2AOR who gave a very informative talk on AMSAT-VK and working Low Earth Orbit (LEO) amateur satellites and the ISS. It is deceptively simple to work some of the FM "repeaters in the sky" with just one or two dual band hand held units. You need two if you want true full-duplex, one as a receiver and one as transmitter. There was an excellent article in AR magazine several months ago by Julie VK3FOWL and Joe VK3YSP on how to build an automatically aligning tracking satellite antenna system. It is the issue with the antenna system surrounded by a bunch of kids on the cover.

And so after a very full and informative day, I descended the stairs to the vendor area only to find it completely deserted! Ah well, next year perhaps.

PS: There was talk of having a copy of the presentation material put up on the CCARC website but it is not there at the time of writing this.

73...Bob Ecclestone VK2ZRE

Editors note: Thank you Bob for providing a most interesting individual perspective on the event. I hope that it inspires other members to write articles on amateur radio for future Oxtales.

## Blast from the Past

In this section we look at what was happening in the club as reported in the March edition of Oxtales 2007.

Alan Nutt VK2GD (SK) was President  
Bruce VK2HOT Vice President, John  
VK2KCE (now VK2KC) treasurer and Jim  
VK2VIV Secretary.

Discussions were being held for a future suitable meeting place. The following is an extract from the discussion.

*"We are continuing our search for a suitable alternative meeting place once our SES friends vacate the present building. Due to some delays in the construction of their new premises on Central Road, the need is still not urgent. Even so, we want to be well prepared when the time finally comes to vacate. The present consensus of our members and the Committee favors renting suitable premises rather than attempting to build or add to some existing structure. The reason for this is obvious when one considers the considerable ongoing costs involved in owning property and the need to comply with a multitude of local government regulations. While we currently have some funds in hand, we need to remember that these funds are, unfortunately, not renewable. In a rental situation, apart from a suitable meeting area, we also need to consider adequate and secure storage space for our equipment."*

Reports on the Wyong field day included the following

*"The 18 February brought another day of fine hot weather and a large contingent of Oxley Region Amateur Radio Club members to the annual Wyong Field day. After a healthy walk from the back of the car park, the sound of a helicopter alerted me to an alternative way of travelling. Yes, it was Dick Smith arriving and avoiding any parking problems and congestion. Dick Smith seemed to radiate a huge amount of energy as he walked the showground and stalls, with a quick quip and a cheery hello along the way."*

There was also ". . .a display of amateur gear

*at the special 'Wyong Field Day' price of around \$17,000, a saving of more than \$500 provided great interest and a discussion topic. It was intriguing to see state of the art equipment that will slowly filter down the price range in the future. However, the consensus was that it would be hard to gain XYL acceptance of such a set into the shack! . . ."*

Editors note: Does anyone remember what the piece of equipment was that attracted such a price? This could be the basis for a follow up in the May edition of Oxtales.

Preparations were under way for the John Moyle Contest that used to be held at the Tacking Point Lighthouse site on the old Lighthouse Keeper's Cottage. The following photograph shows the site set up for the contest. Roy VK2EJB (SK) who was formally VK2YOR can be seen with his back to the camera



The club had 47 financial members as of March 2007 (compared with 68 Financial Members today).



## Silent Key

### Roy William Burges VK2EJB



Roy passed away peacefully on the night of Thursday the 2<sup>nd</sup> of February 2017. He had recently moved into the Bethany Nursing Home in Port Macquarie. He was aged 91 years.

Roy and his wife June retired to Port Macquarie many years ago after a long and interesting career in the publishing industry. Roy was perhaps better known under his long time previous callsign of VK2YOR. He took out VK2EJB a few years ago.

Roy was born in the UK in 1926. He migrated to Australia where he spent most of his working life. Roy worked in the publishing industry and was a leading innovator in the introduction of modern technology to publishing. At Consolidated Press he oversaw the Women's Weekly's transition to electronic typesetting which led the industry. He often related how exciting it was to have been part of such a revolutionary change in the way news was printed. His technical expertise and vision stood him in good stead throughout an interesting career.

In retirement Roy was an active member of the Oxley Region Amateur Radio Club and until very recently rarely missed a club event. He was proud to have been made a Life Member. Over the years Roy presented several very interesting and entertaining lectures at club meetings on his experiences in the publishing industry. He was always

modest and unassuming but privately he occasionally hinted at just how interesting some of his experiences had been. For many years Roy enjoyed an annual white knuckle ride down the mountain course in the commentary vehicle at the Beechwood Billy Cart Classic. When Roy relinquished this role three years ago he donated his radio commentary equipment to the radio club which continues to use it for the event.



Roy VK2EJB (SK) working with Fay at one of the club's field days on the registration desk.

The Amateur Radio fraternity extends its deepest sympathy to Roy's wife June, and to their children Penny and Scott, and their families.

Roy was privately cremated. In keeping with his wishes for privacy, a public funeral was not held. A gathering of family and invited close friends remembered Roy at a private function. Henry Lundell VK2ZHE was honoured to represent ORARC.

**Vale : Roy Burges VK2EJB**

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

