



OXTALES

First published 1980

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

Newsletter of the Oxley Region Amateur Radio Club Inc.,

PO Box 712 Port Macquarie 2444

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

Region Amateur Radio Club

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



ORARC's fiftieth Anniversary Year

September 2021

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

ORARC VHF/UHF Repeaters

MIDDLE BROTHER

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

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

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

TELEGRAPH POINT

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

VK2RCN 70 cm (VDRM)
O/P 438.425MHz - I/P 433.425MHz

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

President's Report



September 2021

President's Report

ORARC Turns 50

Yes, the Oxley Region Amateur Radio Club Inc. will be 50 years old on the 2nd of October 2021. The club was founded on the 2nd of October 1971 at a meeting hosted by the late Owen Bested VK2AEB in Condon Avenue, Port Macquarie. Sadly, most of those at that meeting have become silent keys but Arthur Monck VK2ATM, and myself, Henry Lundell VK2ZHE, still carry the excitement of forming a radio club so that we could establish a two metre repeater at Middle Brother Mountain. Repeater licences were only issued to clubs so forming a club was a prerequisite to making an application for a licence.

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Down The Coax

Monthly meetings & Friday Nights held in the S.E.S. Building
Central Road, Port Macquarie.

Annual General Meeting

Saturday 4 September 2021 2:00 pm Video Conference
September Monthly General Meeting after AGM - Cancelled

Friday Night Get-Together

Friday 17 September 2021 7.00 pm Cancelled due to
COVID-19

Monthly General Meeting

Saturday 2 October 2021 2:00 pm Cancelled due to COVID-19

Friday Night Get-Together

Friday 15 October 2021 7.00 pm Cancelled due to COVID-19

The 64th Jamboree On The Air will take place on 16 and 17
October 2021

VK2BOR JOTA Participation Cancelled due to COVID-19

Beechwood Billycart Classic

Sunday 24 October 2021 Cancelled due to COVID-19

Monthly General Meeting

Saturday 6 November 2021 2:00 pm Pending due to COVID-19

Friday Night Get-Together

Friday 19 November 2021 7.00 pm Pending due to COVID-19

Spring VHF UHF Contest

Sat & Sun 27 & 28 November 2021

VK2BOR Participation Cancelled due to COVID-19

White Ribbon Coastal Walk Against Domestic & Family Violence

Tacking Point to West Port Park Port Macquarie

Sunday Nov/Dec 2021 To Be Advised pending COVID-19
Restrictions

ORARC Christmas Party

Sunday 5 December 2021 Pending COVID-19
Long Point Winery Picnic Area

Net Controllers' Roster

Nets on Voice Repeater VK2RPM 146.700 MHz

Sundays
(0900 Local)

Thursdays
(1930 Local)

September 2021

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

October 2021

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

November 2021

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

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In 1971 the club had 13 members. The club was the first in lower part of the Mid North Coast of NSW. Members came from Port Macquarie, Wauchope and the Camden Haven as well as from Taree, Old Bar, Forster and Gloucester to the south and from Kempsey, Macksville, Bellingen and Coffs Harbour to the north. The majority of the members were in the area which comprised the then Civil Defence Oxley Region so "Oxley Region Amateur Radio Club" was chosen as an appropriate name.

The reason for wanting to establish a 2 metre repeater on Middle Brother Mountain was to provide reliable VHF radio communications along the Pacific Highway between Buladelah and Kempsey. The ABTN1/ECN8 TV transmitting site had recently been built at Middle Brother Mountain so it was the ideal site for the repeater as the site was accessible and was known to cover the intended area. Ian Dalrymple VK2XU (SK) was the Chief Engineer in charge of the site which greatly assisted with gaining access. Even in those early days there was a lot of paperwork to be done so the appropriate applications were made and a licence for VK2RPM at Middle Brother Mountain was issued.

During the 1970s Amateur Radio became increasingly organized and clubs grew in popularity as they provided an opportunity for like minded people to get together. The membership of the Oxley Region Amateur Radio Club continued to grow and clubs were also formed in Taree, The Great Lakes, Kempsey, Coffs Harbour and later in Wauchope.

Field Days have always been popular and the Urunga Radio Convention which began in 1949 has always set the standard together with The Central Coast Field Day and the various other Field Days that have waxed and waned. The Oxley Region Amateur Club began running Field Days in its early days. The highly successful

2021 Field Day was the club's 45th Annual Field Day. The 2020 Field Day was to have been the 45th Annual Field Day but it had to be cancelled due to the COVID-19 pandemic restrictions but fortunately a short respite in community spread of the virus enabled the 2021 Field Day to be run. Sadly, just after the 2021 Field Day the highly infectious Delta variant of the virus appeared in NSW and the restrictions returned.

By 1991 the membership of the Oxley Region Amateur Radio Club had grown to 63 members. In 2011 there were 57 members. 5 years later in 2016 the membership had increased to 68 and in 2021 the membership is now at a record high of 89 members. Along the way many members have become Silent Keys so it is a testament to the value of the club that the club continues to attract many more new members than those who have become Silent Keys.

Education has always been a major activity of the Oxley Region Amateur Radio Club. A very large number of local Amateurs obtained their licences through the classes run by the club. Founding member Arthur Monck VK2ATM was first to run classes. Classes have run continuously for almost the entire 50 year history of the Club. In the early days it was Novice, Limited and Full licences with a great many Amateurs achieving the upgrade to the coveted Full Call. As well as theory a lot of effort went into proficiency in Morse Code and many older members were tutored and tested by Life Member Keith Hanlon who passed away aged 84 years in 2019. Keith had been the Post Master at the old Port Macquarie Post Office when it was on the corner of Horton and Clarence Streets. He was the last telegraph officer to receive a telegram for a customer at the Post Office.

Larry Lindsay VK2CLL who was re-elected as the club's Education Officer at the 2021 AGM has been running classes for over 40 years. The club owes Larry a deep debt of gratitude

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for his continuing contribution. He has lost count of the number of Amateurs who gained their licences through his classes. Since the introduction of the Foundation Licence in 2005 Larry has also conducted assessments for all grades of licences. Sadly, members Alan Nutt VK2GD and Ross Boyd VK2RR who were also accredited assessors became Silent Keys in 2010 and 2015 respectively. Today club members Bob Ecclestone VK2ZRE and Steve Wynn VK2ZSW are also assessors so the club is well placed to continue training and assessments when the current COVID-19 restrictions are further eased.

The club achieved that first goal of establishing and maintaining the VK2RPM 146.7 MHz two metre FM repeater at Middle Brother Mountain. Of course since then the club has done much more than that. The VK2RPM Middle Brother repeater site also has a 70 centimetre repeater and a 2 metre APRS digipeater. The club also has the VK2RCN repeater site at Telegraph Point which has 2 metre and 70 centimetre repeaters including a 2 metre APRS digipeater and the recently added DMR RadNet 70 centimetre repeater. A replacement 6 metre repeater is being constructed for VK2RCN. A multi mode digital voice UHF repeater will also be added to VK2RCN to complement the dedicated DMR repeater.

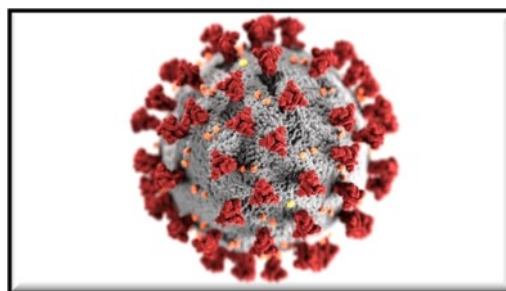
The club's current major project is the establishment of a new repeater site at Telegraph Point for the VK2RCN repeaters.

The club's communications caravan is normally used for the club station VK2BOR participation in the various annual contests and JOTA and an antenna shootout each year. Unfortunately, all these activities have had to be cancelled in 2020 and 2021 due to the ongoing COVID-19 pandemic restrictions.

The club's actual 50th birthday is the 2nd of October 2021 which is the Saturday of the Labour Day Long Weekend. The

ORARC October Monthly General Meeting which would normally be held on Saturday the 2nd of October 2021 has been cancelled due to the COVID-19 restrictions. Originally it had been intended to hold a 50th Anniversary dinner on the 2nd of October but this will not now take place to the uncertainties of the COVID-19 restrictions. The club will endeavour to hold a suitable celebration to mark the club's first half century when the restrictions are lifted.

COVID-19



Unfortunately, as has already been mentioned, the continuing mandatory restrictions imposed to reduce the spread of infection by the COVID-19 virus have greatly impacted on club activities. The cancellation of the club's face to face activities is but a small part of the world wide disruption to social and business life.

Fortunately, Amateur Radio is a hobby which can still be enjoyed in these difficult times. It is very pleasing to see the increasing amount of on-air activity and workshop construction being undertaken. The retailers of Amateur Radio equipment and electronic equipment and components continue to report that the market is buoyant.

Solar Cycle 25



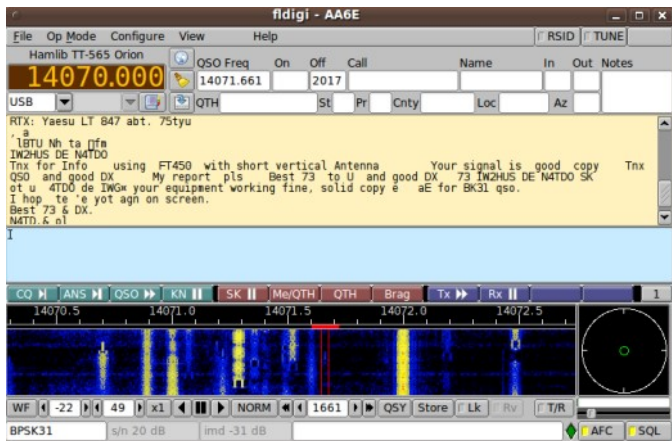
Radio Amateurs are looking forward to improved HF propagation now that the

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new solar cycle has commenced. Since the beginning of this year the higher HF bands have seen an increasing number of openings with many new Amateurs experiencing the joys of 10 metre DX for the first time. Six metres is showing great promise with reports of international contacts and the indications are that the summer Sporadic E season will start early this year. I have had several contacts into VK3, VK5 and VK7 during the last month. There's lots of great DX to be worked on 40 metres in the early evenings and even QRP stations are making good contacts on 20 metres.

Digital Data Modes



A great many Amateurs have joined the ranks of those communicating via the various digital voice and digital data modes.

The great number of HF and 6 metre digital data transmissions to be heard are often the first indicator that bands are open. WSPR (Weak Signal Propagation Reporter) is a send-only mode which has become very popular indeed. You transmit a data signal containing your location and callsign during the course of a minute. You can then check online to see which stations received your signal. Even very low power transmissions can often be heard over very large distances when propagation is favourable.

Other popular digital data modes such as JT65, JT9 and FT8 are a little like WSPR,

but they allow two way short message contacts to be made with other stations. PSK31 is another popular digital data mode for making two way contacts. Again only low power is required. RTTY (Radio Teletype) is still popular. Some radios such as the new Icom IC-705 have inbuilt RTTY decoding capability. SSTV (Slow Scan Television) is also popular. The ISS (International Space Station) recently transmitted a great collection of SSTV pictures on 2 metres. Several ORARC members successfully received the images.

The digital data transmissions use various methods such as the discrete multi-tone modulation modes used by Multi Tone 63 (MT63) and multiple frequency-shift keying (MFSK) modes such as FSK441, JT6M, JT65, and FT8, Olivia MFSK, as well as Amateur teleprinting over radio (AMTOR), D-STAR (Digital Data) data-only mode, Hellschreiber, also referred to as either Feld-Hell, or Hell a facsimile-based teleprinter.

Various packet radio modes include the very popular APRS (Automatic Position Reporting System) which operates on 145.175 MHz in Australia. ORARC has APRS digipeaters at Middle Brother Mountain and Telegraph point so you will hear lots of data packet transmission if you listen on 145.175 MHz FM. Have a look at Google Maps APRS <https://aprs.fi/#!lat=-31.25000&lng=153.00000> to see where the stations are. Many Yaesu and Kenwood and some of the newer Anytone transceivers are capable of APRS transmission using their inbuilt GPS receivers. APRS position packets can also be sent via the internet or through HF gateways. In Port Macquarie Joe VK2BG uses the internet and Trevor VK2TT uses HF. Most of the other mobile stations near Port Macquarie are using 145.175 MHz on 2 metres.

Note that ships and other vessels use a very similar position reporting system to APRS called AIS (Automatic Identity System) using marine

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VHF radio and satellites . Have a look at the Marine Traffic at <https://www.marinetraffic.com/en/ais/home/centerx:153.5/centery:-31.5/zoom:10> (see below traffic off the coast off Port Macquarie and Newcastle).



VHF ducting over the ocean can often be seen with ships being heard by AIS stations over long distances. When you see ships near New Zealand being heard by the AIS stations at Port Macquarie and Coffs Harbour it is worth pointing your 2 metre and 70 centimetre beams toward New Zealand and calling CQ. These openings are more common in summer but such an opening occurred during this August.

A popular digital data mode for sending and receiving email messages by HF radio via the internet is Winlink <https://www.winlink.org/tags/australia> Amateurs are using Winlink for emergency communications. It is necessary to set up an account to use Winlink. Sailmail <https://en.wikipedia.org/wiki/Sailmail> is a commercial application using Winlink principles for boat owners to send and receive emails without having to have an Amateur Radio licence. To make it simple to make the HF radio connections ALE (Automatic Link Establishment) is often a feature included in equipment designed for HF data communications.

Don't forget that Foundation Licence

holders are now permitted to use the digital modes.

Despite the low power of most of the above transmissions many signals will be S9+ when the bands are open. If you haven't tried working the digital data modes it is worthwhile to have a look on the internet to see what you are missing. A simple search for "HF digital data modes" is a good start. There are lots of web sites with easy-to-understand introductions to the various modes. One example is <https://www.essexham.co.uk/how-to-get-started-with-data-modes> Sites such as <https://www.sbarc.org/digital-mode-software/> have links to some suitable software downloads. Most of the software is free to download. Modern transceivers that have USB ports make it very simple to connect your radio to your computer using just a cable. Older radios will require the use of an interface between the radio and the computer but there is lots of information on building or buying suitable interfaces. If you ask around you will find lots of fellow Amateurs who will be only too happy to share their knowledge and experience to help you get started.

If you would like to know what the various data transmissions sound like and look like on a spectrum display do a search on the internet. An example is <http://w1hkj.com/modes/index.htm>

Digital Voice Modes

Digital voice modes are very popular too. Readers of recent articles in Oxtales will by now be very familiar with DMR.

There are also other digital voice modes including the Yaesu Fusion C4FM which is supported by the 2 metre and 70 centimetre repeaters at Middle Brother Mountain, Telegraph Point and Taree and Great lakes.

Yaesu Fusion supports data transmission as well as voice. *Continued on next page*

DStar is also popular. Like most of the digital voice modes DStar is also capable of data transmission. As well as the usual internet linked connectivity and VHF and UHF radio transmissions, DStar has the big advantage of being a digital voice mode that can be used on HF for direct station to station contacts. If you have a DStar capable HF radio such as an Icom IC-705 or IC-7100 but haven't tried DStar on HF it is well worth trying the DStar digital voice mode next time you are in contact with someone on HF who is using a DStar capable HF radio. You will be pleasantly surprised.

Those who volunteer with SES or RFS will be familiar with P25 digital voice. P25 capable radios are readily available for the amateur VHF and UHF bands.

There are only a few P25 Amateur Radio repeaters but most hot spots support P25 so this is a popular way of using P25 radios.

As well there are digital voice modes such as NXDN which is starting to be used commercially so there will be NXDN capable radios on the market. Again, many hotspots support NXDN.

On HF, apart from DStar, there are various digital voice modes such as FreeDV digital voice which can be used on your existing HF radio via a free downloadable program that can be run on your computer. Alternatively a self contained Free DV modem is available which simply plugs into your existing HF or VHF/UHF radio. Some ORARC members already have the Free DV modem. See <https://freedv.org/> for more information on Free DV.

There are also other digital voice protocols, including some proprietary ones such as the one that Codan uses in its Envoy HF transceivers. You can listen to examples of the Codan digital voice under various signal conditions at <https://codancomms.com/solutions/digital-voice-technology>

Hotspots

The popularity of digital voice hotspots is growing at an exponential rate. Not only are Amateurs setting up digital voice hotspots at home but many are also setting up mobile hotspots so that they can operate from their vehicles as well. Many local Amateurs are sporting new DMR hand held and mobile transceivers to complement the C4FM Yaesu Fusion capabilities which many already had.

DStar is also popular as many of the recent Icom transceivers including the IC-7100, IC-9700 and the newly released IC-705 have DStar capability. P25 and NXDN digital voice are also supported by the various hotspots. One big advantage of the digital voice technology is that most of the various digital voice protocols can be accessed by radios running any other digital voice protocol via the hotspots. For example, C4FM Yaesu Fusion radios are able to connect to any of the DMR talk groups this way.

AGM

Due to the COVID-19 pandemic the AGM which was originally scheduled for the 7th of August 2021 had to be postponed to Saturday the 4th of September 2021 as a Microsoft Teams video conference which was permitted by NSW Fair Trading. The virtual meeting ran very smoothly although the number of members who took advantage of participating was smaller than expected.

Thank you to Thomas Rae VK2ATR for setting up and moderating the Microsoft Teams meeting. Thank you to Thomas for also being the Returning Officer and conducting the AGM elections.

Written nominations were received for the Committee positions. This was most encouraging and got the AGM elections off to a good start.

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I am most honoured to have been re-elected as President, Secretary and Public Officer for the 2021 – 2022 year. Congratulations to Paul Colledge VK2ICQ on being re-elected Vice President. Congratulations to Dennis Meade VK2DAM on being re-elected as Treasurer.

Congratulations to the elected Committee members, Larry Lindsay VK2CLL, Rob Frost VK2CRF and Ian Lindquist VK2GL.

Larry Lindsay VK2CLL is continuing in his long serving role as Education Officer. Many members have obtained their licences and upgrades through Larry's classes over a great many years. Anyone thinking of obtaining a licence or upgrading should contact Larry. While training and assessments are currently suspended due to the COVID-19 situation, the training and assessments will recommence as soon as circumstances permit. Larry, together with Bob Ecclestone VK2ZRE and Steve Wynn VK2ZSW have AMC accreditation to conduct assessments so the club is well placed to run assessments locally. Steve Wynn VK2ZSW as a level 3 assessor reminds members that remote assessments can be set up through AMC so anyone who is ready for assessment does have this option if they would like to be assessed now. However, Steve points out that AMC have been overwhelmed by applications from Foundation licensees seeking 3 letter callsigns so delays are to be expected.

Paul Colledge VK2ICQ was re-elected as Webmaster. Paul has built the ORARC website to an extremely high standard and continues to regularly update it with both club news and breaking Amateur Radio news. The website is a great ambassador for the club, and for the Amateur Radio service as a whole. Thank you, Paul.

ORARC is on Facebook. Congratulations to John McLean VK2KC on being re-elected as Facebook Administrator. The ORARC Facebook continues to be very popular, especially during the continuing social

upheaval caused by the COVID-19 pandemic. Thank you to John for continuing to run the site.

Congratulations to John Hansen VK2AYQ on being re-elected as Oxtales Editor. The club is indebted to John for his tireless work in continuing to publish Oxtales to a very high standard. Thank you and congratulations to Arthur Monck VK2ATM for on being re-elected as Assistant Oxtales Editor.

Also, thank you to Ian Lindquist VK2GL and Darren Froggatt VK2MIA for their ongoing work as Oxtales proof readers. Thank you to Sue Meade for joining the production team as a proof reader. A lot of work goes on behind the scenes in publishing each issue of Oxtales.

John Bailey VK2KHB was re-elected as Club Historian. Congratulations and thank you to John for continuing to maintain the ORARC history. There is a lot of history to keep track of now that the club is in its 50th anniversary year.

A full list of all the Office Bearers elected at the 2021 AGM is included in this issue of Oxtales.

One position that was not filled at the AGM is that of Social Director. Apart from the Field Day there haven't been any face to face social activities this year due to the restrictions imposed by the COVID-19 pandemic. Everyone is looking forward to those restrictions being lifted and a return to the normality that we had always taken for granted. When that happens we will definitely need a Social Director. Please consider taking on this role. The Committee looks forward to someone stepping forward. Please contact the Committee.

At the virtual AGM, Ian Lindquist VK2GL was recognized as Clubman of the Year for his dedicated valuable contribution to the club. His DMR articles have made Oxtales one of the

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most read club newsletters in Australia. Congratulations, Ian. Ian will have the 2021 Clubman of the Year certificate and the very distinctive 2021 Clubman of the Year badge to remind him of the esteem in which he is held by club members. Normally the presentation of this annual award is a photo opportunity but members will have to wait to see Ian sporting the badge when we are able to meet face to face again.



RD Contest

This year the Remembrance Day contest and the International Lighthouse and Lightship Weekend both took place on separate weekends but the COVID-19 restrictions meant that the club station VK2BOR was unable to be set up this year for these events.

The RD contest took place over the weekend of Saturday and Sunday the 14th and 15th August 2021.

With a large part of Australia in lockdown due the COVID-19 pandemic, an unprecedented number of home stations participated in this year's RD Contest. The activity on the Amateur Bands during the contest was extraordinary. Every available frequency on 80, 40 and 20 metres was continuously occupied. Many people were on air for the full 24 hours of the contest. On Saturday night between midnight and dawn 160 metres was crowded with dozens of stations taking full advantage of the bonus

points for the nocturnal 160 metre contacts.

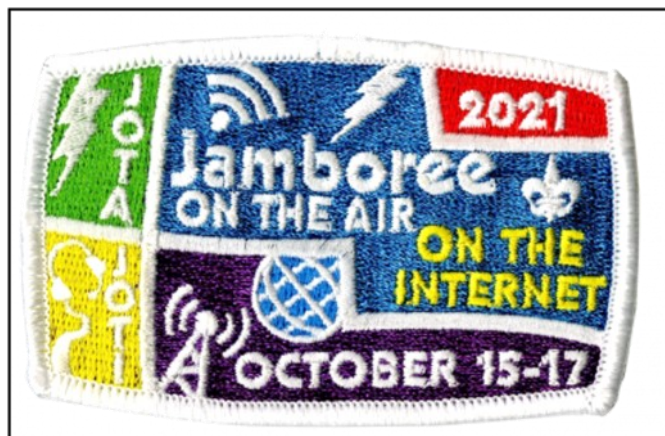
International Lighthouse and Lightship Weekend 2020



The ILLW took place on the weekend after the RD Contest on Saturday and Sunday the 21st and 22nd of August 2021.

Sadly, as with the RD Contest the COVID-19 restrictions meant that the club station VK2BOR was unable to be set up this year.

JOTA 2021



The 64th annual Jamboree on the Air will take place over the weekend of the 16th and 17th of October 2021. It is also the 25th annual Jamboree on the Internet.

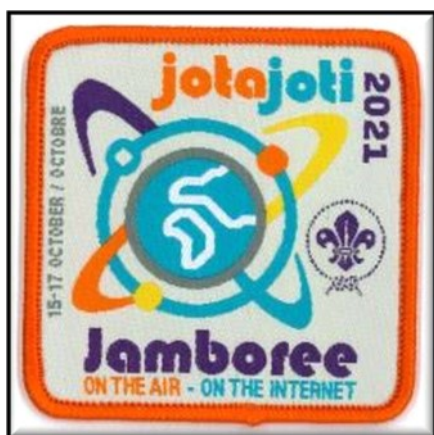
Sadly, the annual ORARC participation in JOTA is another victim of the ongoing COVID-19 restrictions.

It was a very hard decision to cancel the VK2BOR JOTA 2021 participation but the nature of the hands-

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on JOTA radio contacts makes it impossible to maintain the mandated social separation.



The club is very apologetic to the 1st Port Macquarie Sea Scouts who have keenly run JOTA and associated activities every year for most of the history of ORARC. 2021 is now only the second year that club members have not been able to set up a station for JOTA. It is most upsetting to break with such a long tradition but the 1st Port Macquarie Sea Scouts have been very understanding.

Tracey Walsh, Group Leader of 1st Port Macquarie Sea Scouts has asked that her thanks on behalf of the Group be conveyed to all those ORARC members who normally participate in setting up running the VK2BOR JOTA station each year and were intending to do so again this year. The 1st Port Macquarie Sea Scouts greatly appreciate the ongoing support of JOTA by ORARC club members and looks forward to a successful 65th annual Jamboree on the Air in 2022.

In preparation for JOTA 2022 next year club members are reminded that it is a requirement of the Scouting Association that all volunteers must have a Working With Children (WWC) check number. An extension has been granted to those whose numbers are about to expire but they will need to renew their checks for next year. Anyone who does not already have a WWC number can easily obtain one on line at <https://www.kidsguardian.nsw.gov.au/child-safe-organisations/working-with-children->

check. Renewals can be accessed using the same link. For volunteers there is no cost. Simply complete the on line form and you will receive an email. Print out the email and take it the RMS NSW Government Service Centre (In Port Macquarie it is in the building in Central Road that was originally the Motor Registry) where you will have to show your Drivers Licence for identification. The counter staff will verify the identification and you will receive the WWC number shortly afterwards by email.

We look forward to being able to participate in JOTA again next year.



Beechwood Billycart Classic



Courtesy Wauchope Gazette

The 41st annual Beechwood Billycart Classic was to take place on the morning of Sunday the 24th of October 2021.

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Sadly, the event is another victim of the COVID-19 restrictions and the 2021 Beechwood Billycart Classic has been cancelled. After last year's cancellation it had been hoped that the 2021 event would go ahead but this was not to be.

ORARC members have provided safety communications for the Beechwood Billycart Classic every year. We look forward to continuing the Club's involvement in next year's Classic when hopefully the current COVID-19 restrictions will have been lifted.

The Beechwood Billycart Classic is normally a great family day out with plenty of entertainment and food stalls in the finish area adjacent to the Beechwood Hotel.

White Ribbon Coastal Walk



The annual White Ribbon Coastal Walk Against Domestic & Family Violence from the Tacking Point Surf Life Saving Club to West Port Park in Port Macquarie normally takes place on a Sunday in late November or early December. In previous years, members of the Oxley Region Amateur Radio Club have provided the safety communications for the event and look forward to continuing to do so.

There will be more news regarding the 2021 walk in November Oxtales when the impact of COVID-19 on the event will be known.

Christmas Party

Don't forget that the club's Christmas party is planned to take place on Sunday the 5th of December 2021. Normally the Christmas party would be held on the December monthly general meeting date of Saturday the 4th of December 2021 but the venue has been booked for a major event on that day so the ORARC Christmas party will be on the Sunday this year. The very popular Long Point Art Gallery and Vineyard picnic area covered deck venue has been booked for Sunday the 5th of December 2021.



Mark your calendar now. It is hoped that the current COVID-19 restrictions will be eased sufficiently by December so that the Christmas Party can take place but this will be confirmed together with more details in November Oxtales.

2022 Field Day

The 2022 Field Day is only 9 months away. This will be the 46th Annual Field Day.

The dates of the 2022 Field Day are Saturday and Sunday the 11th and 12th of June during the 2022 Queens Birthday Holiday long

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weekend. Planning is already in progress. It is certainly hoped that the current COVID-19 restrictions will no longer be in effect by June next year so the Field Day can go ahead as planned. We were fortunate that the 2021 Field Day was able to be run as planned so there is a strong basis for our optimism.

The venue will be the same as last year, the hall at the Wauchope Showground. The hall has been booked for 2022 and the deposit already paid. The hall provides a spacious indoor venue with excellent access and parking in the showground. There is a separate alcove in front of the kitchen which provides a quiet area to sit down and enjoy the tasty food from the barbeque and the free tea, coffee and biscuits.

The Wauchope Showground permits camping and the rates are very reasonable but those wishing to stay on site in their own caravans or motor homes (\$20) or tents (\$10) should book ahead as the number of campsites is limited and the June Long Weekend is always a popular weekend. After the COVID-19 restrictions of 2021 it is expected that the showground will be even more popular than usual in 2022 For bookings see the website at <http://www.wauchopeshowsociety.com.au/camping.html> The phone number for the on site caretaker is 0475 111 074 . The campsites have mains power and the amenities include toilets and hot showers. The Showground is pet friendly and you can even stable your horse for \$10 a night.

The Field Day Dinner will be at 6pm on Saturday night the 11th of June 2022 in the Seaview Room at the Port Macquarie Golf Club. Thank you to Gary Ryan VK2ZKT of Radio Supply Pty Ltd at Bellingen for the generous sponsorship of the function room hire which has already been paid for. The Seaview Room is a very pleasant venue for the Field Day dinner. As in past years the excellent full dinner menu of the Restaurant will be available at club prices.

More details in the November 2021 issue of Oxtales.

WICEN (NSW) Mid North Coast Group



WICEN (NSW) Mid North Coast Region normally holds its monthly meetings after the conclusion of the ORARC Monthly General Meetings in the SES Building in Port Macquarie. Current and prospective WICEN members are invited to attend the meetings when the COVID-19 restrictions are eased they are able to be run again. Anyone interested in joining WICEN should contact Larry Thompson VK2LJT or Rob Frost VK2CRF. For more information, visit the WICEN NSW website <http://www.nsw.wicen.org.au/>

The WICEN AGM was held on Saturday the 18th of September 2021 as a virtual meeting using Google Meet videoconferencing on line. There was an excellent attendance. It was a great opportunity to see and speak with a lot of WICEN members. The retiring Committee was re-elected for the 2021-2022 year.

The annual VH-MDX SAREX in the Barrington Tops would normally have taken place in September 2021 but was cancelled due to COVID-19. It is expected that the annual SAREX will resume again in 2022.

A significant number of WICEN and ORARC members are also SES members.

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As well as membership of local SES Units, there are opportunities in SES to join regional Capability Units and also the Operational Support Unit. Please contact Larry Thompson VK2LJT if you would like more information. The Capability Units and the Operational Support Unit offer opportunities for those with technical and communications skills to use those skills in various interesting and challenging SES activities. One example which some members will be familiar with is the deployment of the SES Forward Command Vehicle. As well there are opportunities to be trained on the deployment of the new generation COWs (Cells on Wheels) and the new MICC (Mobile Incident Command Centre).

Membership Renewals

Thank you to all the members who have already renewed their memberships this year. However, quite a few membership subscriptions are still outstanding. Please contact the club Treasurer Dennis Meade VK2DAM if you are unsure of your financial status. Your continuing membership is greatly valued by the Oxley Region Amateur Radio Club. The membership subscriptions form a very significant part of the club's annual income. Payments may be made by direct deposit to the club's Regional Australia Bank account.

Bank Name:

Regional Australia Bank

BSB: 932-000

Account Number:
500032744

Account Name:
Oxley Region Amateur Radio Club Inc.

Please quote your Callsign as the reference when you make the direct deposit.

The annual membership subscription rates remain unchanged as confirmed at the 2021 Virtual AGM. Ordinary Membership is \$40.00 per annum, Associate Membership is \$20.00 per annum, and Distant Membership is \$10.00 per annum. The Family Membership discount continues to apply.

New Members

It is with great pleasure that we welcome three new members to the Oxley Region Amateur Radio Club, John Ekman VK2VEX of Wauchope, Dr John Fox VK2AEG of Wahroonga and Dennis Greene KN4VKT of Edgewater, Florida USA. John VK2VEX recently moved to Wauchope and is looking forward to meeting up with the local Amateurs when the COVID restrictions permit. John VK2AEG and Dennis KN4VKT are distant members. Dennis KN4VKT is our first overseas member for a long time. He hails from near Daytona Beach which is a location which many members will know of. He has recently recovered from the Corona Virus and has been able to return to his work as a landscaper. Dennis has been a regular participant via Echolink in the ORARC Thursday Night and Sunday Morning 2 metre nets for some time and decided to join the club.

Silent Key

Terry Wood VK2TEZ of Macksville sadly passed away on Friday the 17th of September 2021. Many members will have met Terry at the Urunga Radio Conventions. Terry was vice President of the Urunga Radio Convention Committee. He ran the kitchen during the events and served the legendary Macksville pies and his home made pancakes which always made lunch at the conventions a highlight of the event. Terry will be sadly missed.

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Thank you to Gloria Savins, Honorary Secretary of the Urunga Radio Convention for advising of Terry's passing. Members of the Oxley Region Amateur Radio Club extend our Sincere Condolences.

Vale Terry Wood VK2TEZ.



Stay Safe

Stay safe. Hopefully there will be better news regarding face to face meetings and activities to report in November 2021 Oxtales.

Henry Lundell VK2ZHE
President

List of ORARC Founding Members

Oxley Region Amateur Radio Club Founding Meeting 2 October 1971 At QTH of Owen Bested VK2AEB Condon Avenue Port Macquarie

Peter Alexander VK2PA

Owen Bested VK2AEB

Geoff Hunziker VK2BGF

Garry Wilson VK2ZIX

Arthur Monck VK2ATM

Henry Lundell VK2ZHE

Robert Worthington VK2ZVI

Bill Collinson VK2ZYG

Tony Reynolds VK2ZGC

Jim Griffiths VK2BGG

Bill Eagling VK2AEY

Noel Drummond VK2AAD

Graeme Greenwood VK2ZIS

Howard Bruce (SWL)

Happy Birthday Linux

Still on the Birthday theme - Linux turns 30 this month! Linux v0.01 was released on 17 September 1991.

Even if you are a died in the wool Windoze or Mac user, if you own an Android smart phone, you are also a Linux user.

Android is based on the Linux kernel, iOS is based on Darwin (BSD) Unix, so it is also "UNIX like".

Here is the link to the article.

<https://www.howtogeek.com/754345/linux-turns-30-how-a-hobby-project-conquered-the-world/>

Cheers...Bob Ecclestone VK2ZRE



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**ORARC Virtual AGM Saturday 4th of September 2021
Held by Microsoft Teams Video Conference**

List of Office Bearers & Appointments Elected at the AGM

President:	Henry Lundell VK2ZHE
Vice President:	Paul Colledge VK2ICQ
Secretary:	Henry Lundell VK2ZHE
Treasurer:	Dennis Meade VK2DAM
Committee Member 1:	Larry Lindsay VK2CLL
Committee Member 2:	Rob Frost VK2CRF
Committee Member 3:	Ian Lindquist VK2GL
Public Officer	Henry Lundell VK2ZHE
Repeater Chairman:	Henry Lundell VK2ZHE
Oxtales Editor:	John Hansen VK2AYQ
Oxtales Co-Editor:	Arthur Monck VK2ATM
VK2BOR Station Manager:	Henry Lundell VK2ZHE
QSL Manager:	Ian Lindquist VK2GL
Welfare Officer:	Henry Lundell VK2ZHE
Publicity Officer:	Paul Colledge VK2ICQ
Education Officer:	Larry Lindsay VK2CLL
Club Historian:	John Bailey VK2KHB
Social Director:	No nominations – To be filled after COVID-19
Webmaster:	Paul Colledge VK2ICQ
Facebook Administrator:	John McLean VK2KC
WIA Liaison Delegate:	Bob Ecclestone VK2ZRE
Member Liaison Officer:	Paul Colledge VK2ICQ

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Battery World Battery Recycling Bins



The distinctive store is very easy to find on Hastings River Drive. They are open 7 days a week. Their web site is at <https://www.batteryworld.com.au/stores/battery-world-port-macquarie> Their telephone number is (02) 6584 9873 or 131 760.

When you empty your used batteries at Battery World, please take your bin home with you to keep collecting your used batteries. The battery recycling bins are made of plastic and may be washed out in warm soapy water in the event that any of your used batteries have leaked.

Thank you to Battery World for accepting used batteries for recycling. It's a valuable contribution towards protecting the environment by helping to ensure that used batteries don't end up in landfill. The Oxley Region Amateur Radio Club Inc. supports the initiative to encourage battery recycling and would like to thank Battery World for donating the battery recycling bins.

At the ORARC 2021 Field Day on the June Queens Birthday Holiday Long Weekend a large number of very distinctive purple and yellow battery recycling bins were distributed to attendees. The bins are in the form of miniature wheelie bins. The bins were very kindly donated by Battery World, Port Macquarie.

When your battery recycling bin is full, please take it to Battery World at 1/61 Hastings River Drive in Port Macquarie where they will be very pleased to receive your used batteries for recycling.





Battery World Port Macquarie
Shop 1, 61 Hastings River Drive
Port Macquarie NSW 2444
T: (02) 6584 9873
e: portmacquarie@batteryworld.com.au



13 17 60 • batteryworld.com.au

Construction Project An Interesting J pole Antenna

Contributed by John VK2KC

In my spare time, of which I have plenty of, I have been researching various antennae, and have come across this very interesting J-pole.

I have emailed the designer of this 2m J-Pole and he has responded positively and has given permission to publish the drawing in OXTALES. It contains all the calculations necessary to enable home-brewers to build one.

Note that one thing is missing, the "C" referred to in the table is for the length of the longer element.

Here is his response to my request:

John McLean, VK2KC
vk2kc@bigpond.com

From: Jerry E. Bustin KR7KZ
jerrykr7kz@aol.com

Dear John,
I read you email request with interest. You have my permission to do what ever you wish with my J-pole design. Please see the attachment of the design in full detail.

Once publish, please send me a copy via postal or email. I also have up and running a IRLP STATION 3507 here in Boise, Idaho, USA. I can be found on one of the following IRLP's: 9222/9100/9050 or mine at 3507.

To order a copy of my 'Constructing HF Wire Antennas', Google or see it on AMAZON.COM. On Amazon, My books are listed my name or title. Feel free to order as you or your friend

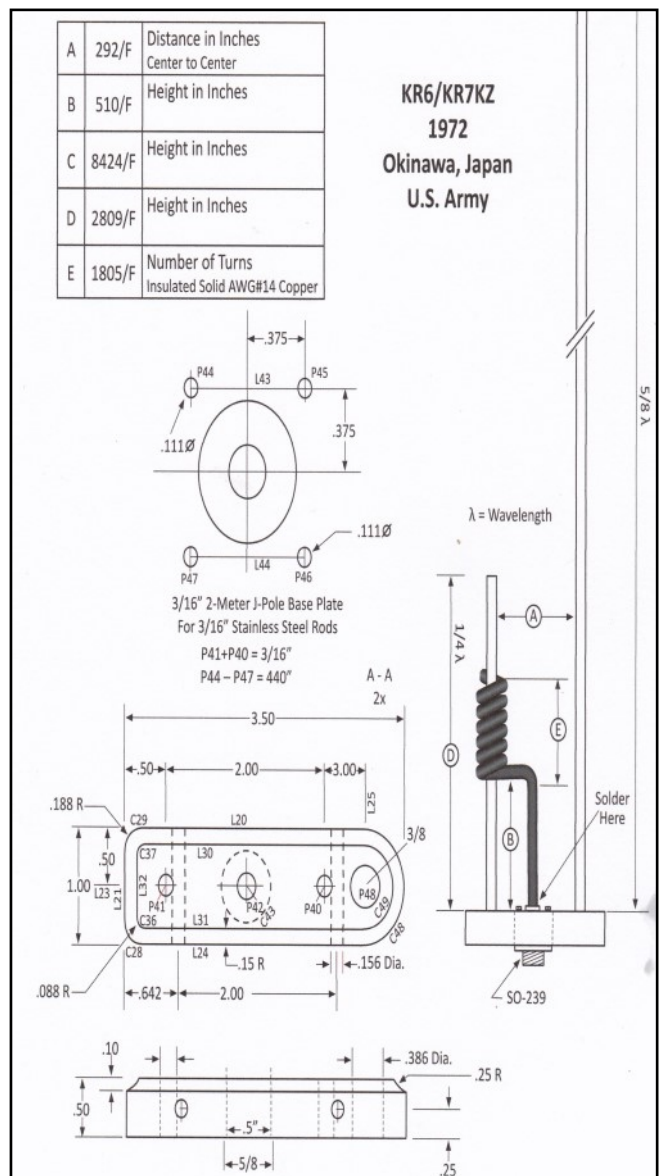
like... You may also wish to GOOGLE my name/callsign or look me up on QRZ.COM.

Best Regards,
Jerry E. Bustin KR7KZ

I haven't constructed this so for those looking to pass the time!

I do have a few of the SO-239 to 3/8" adaptors on hand, these are NOT cheap knockoffs, but good quality ones made in USA and can be used up to 477 mhz.

73
 John
 VK2KC



Moxon Antenna for 6 meters

(a lockdown construction project)

By Ian Lindquist VK2GL



While most modern HF rigs include a 6m band, it seems a lot of amateurs don't venture onto 6m, perhaps because they don't have a suitable antenna. After recently updating my 37 year old Yaesu for a new model, I found myself in the same predicament and decided to do something about it.

Since I wanted to avoid running an extra coax cable into the shack, my initial thought was to simply replace my current Diamond X-30 dual band antenna with a V2000 6m/2m/70cm tri-band. On installation I found the V2000 was beautifully tuned to 51 MHz - perfect for CW/SSB. Unfortunately though, the SWR deteriorated quickly above 52 MHz making it totally unusable for FM repeaters and no amount of adjustment of the 6m counterpoise was going to fix it. It seemed the only course of action would be to construct my own 6m antenna and so was born a lockdown construction project.

My design criteria was for an antenna that

was easy to construct and required no special matching. This led me to two antenna designs – the 'flowerpot' and the Moxon. It has to be said that I actually built both antennas and both worked flawlessly first time but in the end I had to make a choice as to which to mount on my mast. I picked the Moxon, mainly for its additional gain and its ability to be mounted either horizontally or vertically.

Although I chose the Moxon, I must say the flowerpot antenna is an excellent, well performing vertical antenna that can be built by anyone in just a few hours from some RG58 coax and a length of PVC pipe. As for mine, I gave it to another local amateur who was also keen to try 6m, but for anyone else interested in constructing their own I will write a follow up article on constructing a flowerpot antenna in a future issue of Oxtales.

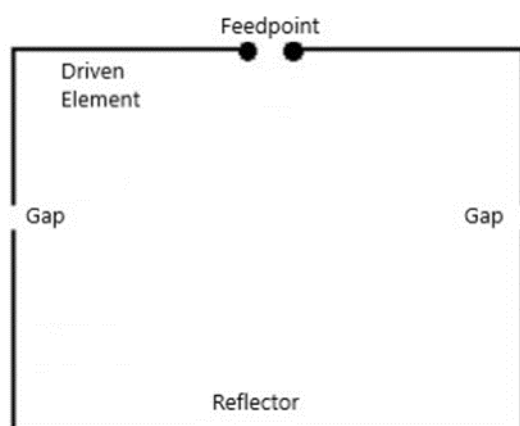
Before I continue let me say that I am no expert on antennas – far from it, hence my need for an antenna design with simple construction and minimal setup. There are plenty of websites and videos dedicated to the building of Moxon antennas of various sizes, frequencies and construction methods and mine is not original or unique. The purpose of this article is simply to encourage others to give it a try because if I can do it – so can you. You don't have to follow my construction, you may prefer to build yours out of cross braces and wire. It doesn't matter as long as you have a go and I believe you will be very happy with the results.

The Moxon Antenna

The Moxon antenna, developed by Les Moxon G6XN, is a derivative of the VK2ABQ square antenna developed by Fred Caton. It is basically a 2-element parasitic beam with the tips of the elements folded towards each other to form a rectangle about 30% smaller than the equivalent beam. However despite its smaller size, the Moxon has several advantages over the Yagi antenna. It greatly exceeds the Yagi in front-to-back ratio and it has a wider beam-width

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making it less critical when aiming. It also has almost equal gain to the Yagi.



As with the Yagi, the Moxon antenna can be mounted vertically or horizontally making it perfect for either FM or SSB/DX operation on 6m. It also has a 50 ohm feed point so you can connect your 50 Ohm coax directly to the antenna and the SWR curve is quite flat making it a good performer across the entire 6m band.

Construction

There are hundreds of websites dedicated to the construction of Moxon antennas. Some use an 'X' frame of fibreglass poles or a rectangular frame of PVC pipe with wire stretched around it while others use rigid aluminium tube. I chose the aluminium tube method.

All the parts for the Moxon are regular off-the-shelf items from Bunnings costing less than \$35 (not including the coax and screws). The straight sections are built from 12mm aluminium tube while the corners are made from 10mm aluminium tube. The 10mm tube is able to slide inside the 12mm tube for adjustment of the final frequency. As it turned out, the calculated dimensions placed my antenna frequency just where I needed it and no further adjustment was required.

The boom is made from 20mm PVC pipe and is connected to the elements using two 20mm electrical conduit tee pieces. I attached the tee pieces to the main elements using rivets but stainless steel bolts and nuts will do just as

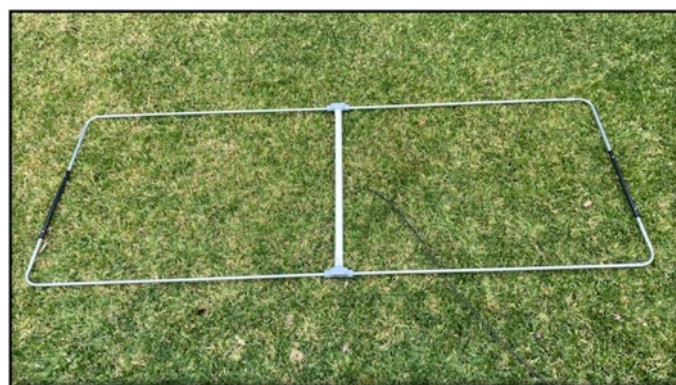
well. The rest of the antenna is held together with 3mm self tapping screws.

The end-gaps between the driven and reflector elements are secured using two 300mm lengths of 13mm poly drip irrigation tube. The poly tube slides neatly over the 12mm aluminium tube and is secured with screws.

Parts List

Description	Qty	Bunnings Part No
12mm x 3m aluminium tube	2	I/N: 1079420
10mm x 1m aluminium tube	1	I/N: 1067742
20mm x 1m PVC pressure pipe	1	I/N: 4750047
Holman 13mm x 1m Drip Irrigation Tube	1	I/N: 3120562
20mm Inspection Tee Conduit	2	I/N: 4330800

Also required: A length of your preferred 50 Ohm coax plus some self tapping screws, bolts or rivets.



The assembled Moxon antenna

Dimensions

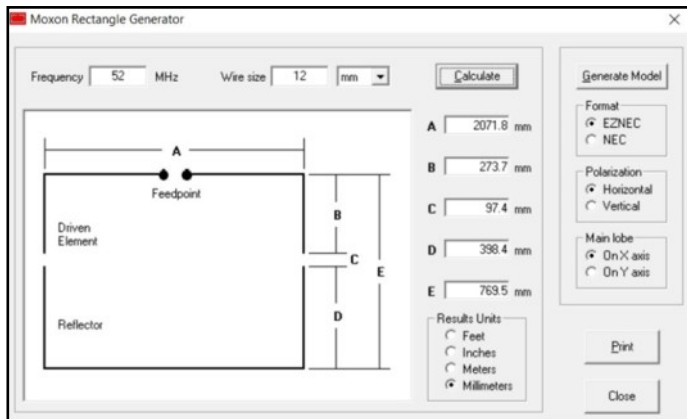
The dimensions for the antenna were calculated using the free Moxon Antenna Calculator program. The program is free for download or alternatively, there are a number of websites that display embedded Moxon calculators that you can use (although many use only imperial measurements).

Using the Moxon calculator, I set my frequency to 52 MHz and the wire size to

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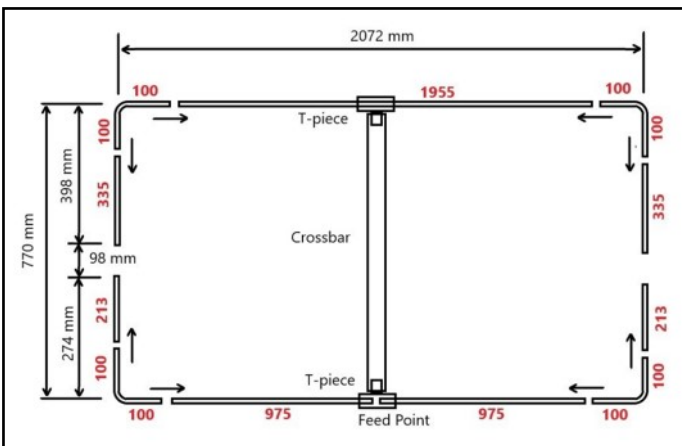
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12mm (to match the 12mm aluminium tube). The resulting calculation is shown below.



For the construction I rounded the numbers for convenience (at 6m the difference is minimal) leaving me with the following dimensions:

- A: 2072mm
- B: 274mm
- C: 98mm
- D: 398mm
- E: 770mm



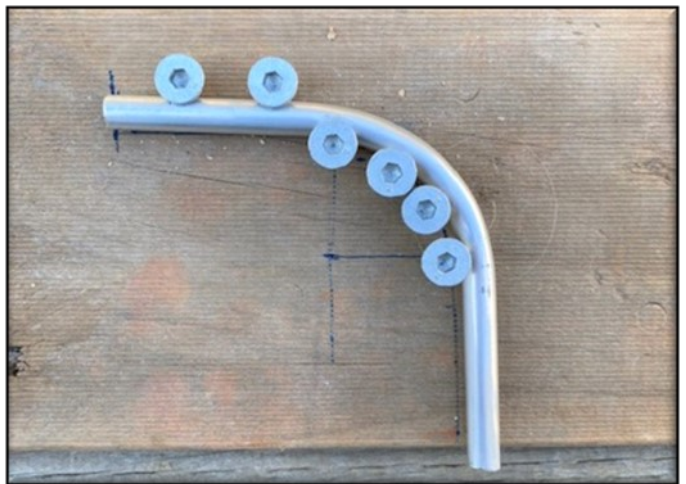
Moxon Antenna Dimensions

Referring to the dimensional diagram above, the measurements shown in black are the overall assembled dimensions of the antenna (as measured between the centres of the tubing). The measurements in red show the actual size of each of the tubing sections.

Cut the straight sections from 12mm tubing. The 12 mm tubing is available in 3m lengths

and you should be able to cut one antenna from 2 x 3m lengths with a little left over. For the corners, cut a 1m length of 10mm tube into four 250mm sections. Form each section into a right angle with a 50mm bend radius. This will leave two legs each about 100mm long. These legs will slide into the 12mm tube to allow adjustment during the final assembly.

As I didn't have a suitable bending machine I fashioned a tool using a piece of wood and some heavy gauge wood screws which I used to manually bend the aluminium to shape.



Home made bending tool

Preparing the Aluminium

Once the aluminium parts are cut, sand the 10mm tube corner legs and remove the burs on the ends of the 12mm tube until they slide freely together. Depending on the tolerances of the aluminium stock you may need to use a 10mm drill to expand the inside dimensions of the 12mm tube slightly. When trial fitting, allow the aluminium to cool first and if they are a bit tight don't let them jam as they can be difficult to separate when this happens (trust me).

Preparing the Tee Pieces

The two tee pieces form the main mechanical structure for the antenna. Unscrew and remove the access plates from the tee pieces and put them aside for later.

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The inside of the tee pieces have a circular ridge which needs to be removed with a hobby knife or file so the elements can sit flat along the inside-back of the tee piece.

Measure along the length of each tee piece and draw a mark inside to identify the centre point. Using the photo below as a reference, drill four holes through the back of each tee piece. The hole diameters should suit the rivets, screws or bolts you are intending to use. The hole positions don't need to be exactly positioned as long as they are spread over the approximate positions shown in the photo below. Once drilled, these will be used to drill matching holes into the associated aluminium elements.



Securing the elements to the tee pieces

Reflector Element

Measure along the length of the 1955mm reflector element and mark the centre point. Slide one of the tee pieces along the reflector element until the centre of the element aligns with the centre of the tee piece and clamp the two together. Use the pre-drilled holes in the tee piece as a template to drill four holes into the aluminium. Secure the reflector element to the inside-back of the tee piece using rivets or bolts.

Driven Elements

Position the ends of the two 995mm driven elements inside the other tee piece so the ends are spaced 6mm apart and centred in the tee piece. Drill and fix the elements to the inside-back of the tee piece with rivets or bolts as per the reflector element.



Ensure a 6mm gap between the driven elements

When placed side-by-side the driven and reflector element assemblies should both be the same length.

Trial Assembly

Once all the parts have been prepared, lay them out on a flat surface and loosely assemble the antenna to make sure everything fits together.

The open ends of the tee pieces should point inwards towards each other.

Slide the four corner pieces into the ends of the reflector and driven element assemblies. Slide the two 274mm lengths onto the corner pieces attached to the driven elements and the two 398mm lengths onto the corner pieces attached to the reflector element.



Fitting the aluminium corners

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Adjust the assembly by sliding the elements along the corner pieces until the antenna matches the dimensions shown in black in the mechanical drawing. The dimensions should be measured from the centre of the tubes. Ensure there is a 98mm gap separating the ends of the folded elements on each side of the antenna.

Lay the two 300mm lengths of irrigation tube alongside these gaps and roughly centre them so that an equal amount of aluminium tube will extend inside each end of the poly tube when assembled. Mark the locations of the ends of the irrigation tube on the aluminium, ensuring that the spacing between the elements is still 98mm. Now slide the aluminium elements inside the poly tube up to the marks and temporarily secure them with cable ties (it may help to cut small slits in the ends of the irrigation tube to allow the cable ties to tighten more securely).

Readjust the antenna assembly as necessary to make sure the outer dimensions are still correct and the ends of the irrigation tubes still align with the marks on the aluminium tube. Once all is OK, temporarily secure all joints with tape to hold them steady then drill and secure everything using 3mm self tapping screws. Secure all the aluminium parts first then secure the irrigation tubes as shown below, being sure to maintain the 98mm gap. When the assembly is complete, re-measure the outside dimensions to confirm nothing moved then remove the temporary tape.



Securing the aluminium corners

Mounting Boom and Coax Connection

The mounting boom is made from a length of 20mm PVC pipe that links the two tee pieces together. To get the correct length for cutting the PVC pipe, lay the pipe alongside the tee pieces. Adjust the antenna so the space between the reflector and driven elements is 770mm at the tube centres then mark and cut the pipe to the desired length.

Cut a 15mm long slit in each end of the pipe to allow it to spread over the tee pieces.

Drill a 7mm hole about 300mm from one end to allow the coax cable to exit the boom (the hole position is offset from the centre of the boom to allow clearance for the mounting hardware). Elongate the hole to minimise stress to the coax.



Feeding the coax into the boom

Fit the boom to the antenna by sliding the ends of the pipe over the tee pieces. The coax exit-hole should be closest to the driven element. Confirm a spacing of 770mm between the driven and

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reflector elements then drill and secure the boom with self tapping screws.

Insert the coax through the hole in the boom and feed it towards the driven element. Remove 15mm of the outer casing and attach solder lugs to the braid and centre of the coax using solder. Drill a hole into each element near the end and secure the lugs with 3mm self tapping screws as shown. Waterproof the connections with silicon.

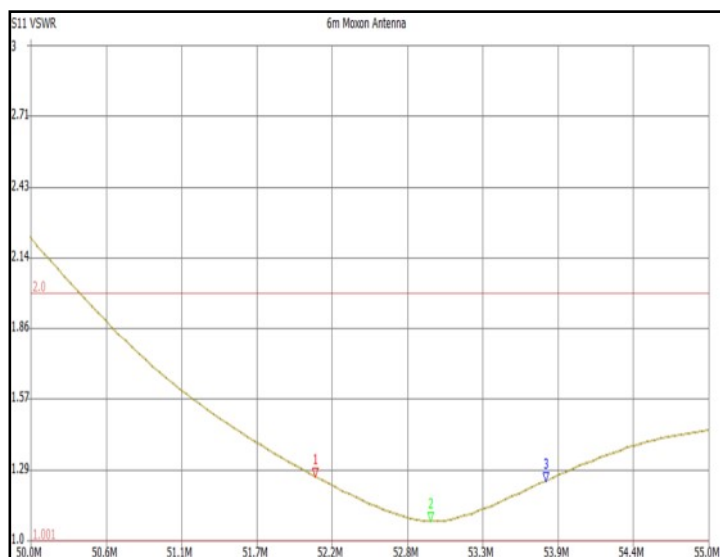
Before continuing I suggest you mark the element that connects to the centre of the coax, with some tape or a cable tie. This will make it easier to identify the active element from the ground element once the tee piece covers are installed – important if you plan to vertically mount the antenna.



Note the cable tie around the left hand element near the joiner in the above photograph.

You can now refit the two tee piece covers

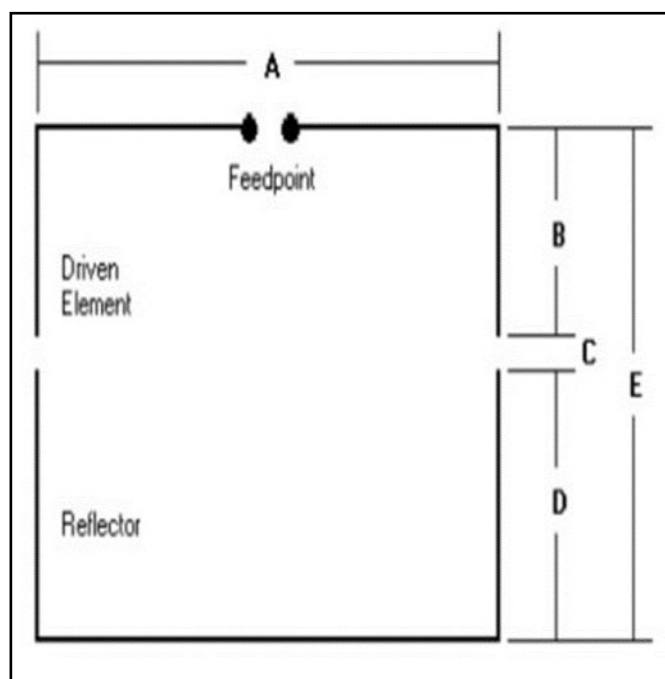
Performance



As you can see from the sweep, my antenna was centred around 53 MHz with an SWR of less than 1.1:1. This was slightly higher in frequency than I had planned for, but since I'm initially targeting the local FM repeater frequencies in the 53 MHz range I've left it where it is for the moment. If your preference is for SSB/CW/DX applications at the lower end of the 6m band, the sliding-tube construction makes it easy to adjust the dimensions for about 51 MHz. The SWR curve is flat enough that re-tuning the antenna to around 52 MHz should result in an SWR of better than 1.6:1 across the entire 6m band.

Based on the practical results from my antenna build, the following dimensions should allow you to re-adjust your antenna, specifically for your application.

	SSB (51 MHz)	Full Band (52 MHz)	FM (53 MHz)
A	2155 mm	2113 mm	2072 mm
B	285 mm	280 mm	274 mm
C	101 mm	99 mm	98 mm
D	414 mm	406 mm	398 mm
E	800 mm	785 mm	770 mm



Thanks to Ian VK2GL for this construction project.



Your Magazine Your View



Date : 04 / 09 / 2021

Author : David Burden - VK3BDX

The new Publications Committee is delighted to bring each edition of Amateur Radio magazine to life. We would love to hear about your ideas and opinions about the magazine to help shape its future. Therefore, we encourage members and non members to complete this survey covering the content, advertising and, most importantly, what you would like to see.

The survey is open to all magazine readers to have a single response. You will find the survey URL and QR code in the magazine or on the WIA website; you can then complete the survey online or on your phone or tablet. If you prefer to have a hard copy of the survey sent to you, don't hesitate to contact the WIA National Office.

The survey URL is available by following the Survey Link on the WIA website (Amateur Radio magazine Reader Survey [surveymonkey.com](https://www.surveymonkey.com)).

The survey closes on 22 October 2021.

WIA DX Awards Program Exciting New Feature - Groups



Date : 03 / 09 / 2021

Author : Graham Alston - VK3GA - WIA Awards Manager

The WIA has added an exciting new feature to its DX Awards Program - Groups. A Group is similar to a leaderboard, but very much more flexible, and are available for all members of the Awards Program, not just VK's.

Groups contain two elements - a filter and a category. A filter can be any combination of BAND, MODE, DXCC, Continent, QSL (worked-only or verified) or Radio type. A category is the way in which you wish to count filtered records. This can be DXCC, Slots, Grid or IOTA.

There is an almost infinite number of Groups that can be defined and they are, in effect, a highly specialised leaderboard.

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This allows the creation of groups like SSB-only, Wires & Dipoles, RTTY, High Band, Oceania, QRP on 80m, Grids on 40m, ICOM radios, WARC bands, Commemorative callsigns etc. The possibilities are virtually endless.

Groups can have an optional “sponsor” who may wish to offer an incentive for the winner of their Group.

You join and leave groups from within your Profile. The "Groups Leaderboards" menu item displays the leaderboard for all the Groups that you are a member of.

There must be a minimum of 3 members of a Group for the Group to display. There are already several Groups defined, so have a look and join as many as you like. Members are free to suggest a Group that might attract at least 3 members. Send requests to vk3ohm-at-wia.org.au.

The WIA DX Awards program is free to all members of the WIA and provides dozens of awards for newcomers through to advanced DX'ers and IOTA hunters. It can be found <here>.

73 from Graham Alston, VK3GA, WIA Awards Manager



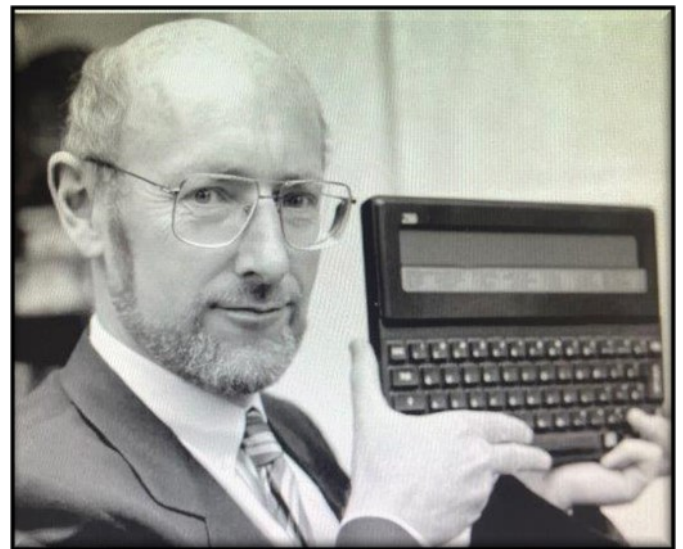
Home Computing Pioneer Sir Clive Sinclair Dies

09/22/2021

Pocket calculator inventor and home computing pioneer Sir Clive Sinclair died at his

home on September 16 following a long illness. He was 81. Sinclair may have been best known for popularizing the home computer. Leaving school at 17, he worked for 4 years as a technical journalist to fund Sinclair Radionics and created the Sinclair Spectrum and the first computer, the Sinclair ZX-81. Many modern-day titans of the games industry got their start on one of his ZX models.

Back in the day, the gamer's computer of choice was either the ZX Spectrum 48K or its rival, the Commodore 64. Among his other inventions was a coin-sized radio. Despite his computer background, Sinclair declined to use the internet, email, or even computers. He also was involved in developing various personal transport systems, including an electric vehicle.



Sir Clive Sinclair holding a ZX-81

Amateur Radio Newsline Report 2290 for Friday September 17, 2021

Dave VK2AYD is kindly supplying various Amateur Radio Newsline Reports on the world of Amateur Radio.

Cancellation of Tokyo Ham Fair 2021, the world's largest ham radio event.

Yoshinori Takao, JG1KTC, chairman of the Japan Amateur Radio League, announced that JARL had been committed to holding the ham fair as planned on October 2nd and 3rd using extreme preventative measures against COVID-19 but new waves of infection made it necessary to call everything off.

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He expressed hope for better chances in 2022. The 2020 ham fair was also called off due to the pandemic. According to the JARL website, more than 42,000 people attended the fair in 2019 over the course of two days.

IARU REGION 3 OPTS FOR VIRTUAL CONFERENCE

The IARU Region 3 is also responding to the pandemic—by holding its first digital regional conference. Jason Daniels VK2LAW brings us that story.

The IARU Region 3 Conference kicks off on September 20th and for its hosting organisation, RAST, it was supposed to be three days of business and fellowship in Bangkok, Thailand. It will instead be held

digitally: a first for Region 3, but a necessary response to the extraordinary circumstances of the COVID-19 pandemic. RAST's president, Jack Hantongkom, HS1FVL, writes on the conference website: [quote] "We are excited about the opportunities of holding an innovative virtual conference." Jack writes further: [quote] "This conference will bring us together at what is a very difficult time for us all." [endquote]

SPECIAL EVENT CELEBRATES BIRTHDAY OF VOA RELAY STATION

NEIL/ANCHOR: The "voice of freedom" transmitted its first words from West Chester, Ohio across the ocean in September of 1944 at the then-new Bethany Relay Station of the Voice of America. The West Chester Amateur Radio Association WC8VOA, which calls the iconic building its home, is celebrating the relay station's birthday this year with a special event station on September 25th and 26th. Jocelyn Brault KD8VRX/VA2VRX told Newline that the club's shack is actually the original control room for the relay station. For the special event, be listening on 20 and 40 meters for SSB, FT8 and perhaps some CW as well. Those making a QSO are eligible for a downloadable certificate available 24 hours after the event.

ULTRA-TINY BATTERY SHOWS POWER AND PROMISE

When it comes to batteries, tiny might just be the next big thing. Kent Peterson KC0DGY explains why.

KENT: The smaller the battery, the more powerful the possibilities? The designers of a new bat-

tery technology being used in a fitness tracker would like to think so. California-based Sila created the battery for a wristband tracker that experts say could revolutionize everyday electronics and perhaps have implications for modes of transportation too. For now, the ultra-tiny powerhouses are in a niche-market item, a fitness tracker called the Whoop 4.0. According to a New York Times article, the battery has the same lifespan as the power source used in the previous model of that tracker but it's a whole one-third smaller.

Sila and Whoop together said the battery had potential for mass marketing in other devices in the next couple of years. Unlike lithium-ion batteries, which rely on the ionization and movement of lithium atoms, these new batteries use an anode made of silicon instead of graphite, requiring smaller space for the lithium atoms as they move from the anode side of the battery to the cathode.

Sila and another company, QuantumScape, told the New York Times that their batteries will likely be used in a few short years in smart eyeglasses, electric cars and maybe even flying cars one day!

REPLICA TRANSMITTER BEING PREPPED FOR DECEMBER EVENT

Big plans are being made to mark the day radio amateurs proved they could send signals across the Atlantic. Jack Parker W8ISH tells us what's happening.

JACK: December 11th, 1921 was a significant day for amateur radio: It was the day of the Transatlantic Test Project, when hams' shortwave frequencies showed themselves to be capable of transatlantic radio communications, even at 200 meters or less. The experimental transmission of station 1BCG, using a tube-based transmitter, was conducted by the Radio Club of America on 1.3 MHz and resulted in successful reception in Scotland.

One hundred years later, December 11th, 2021 will be an equally significant day. A replica of that transmitter will be used to re-enact that CW transmission on 160 meters not far from the spot in Connecticut from which the original CW transmission was sent. Longtime Antique Wireless Association member Bob Raide, W2ZM, now a Silent Key, (SK) built the replica for a special event 25 years ago. AWA volunteers have spent lots of time lately refurbishing it, wiring a plate supply, building a filament power supply and sorting out usable tubes.

For a day that comes along once every hundred years, radio operators—and the transmitter—need to be ready.

Blast from the Past

Blast from the Past' is the section of Oxtales where we reflect on what the club was doing in years gone by. Members are also encouraged to send in items relating to club members or club activities in previous years. The following 'Blast' was sent in by Henry VK2ZHE complete with photograph. Thank you Henry.

In my surfing of past issues of Oxtales looking for details of various events I found the attached black and white image on page 7 of the August 1982 issue. It's a pretty topical image of two of our current members at the 1982 Field Day.



Back then Sandy Brucsmith (was VK2AD and is now VK2WH) was sales manager for Trio Kenwood Australia. He is shown presenting a Kenwood solid state dip meter to Col Terry who was then VK2VQT and is now VK2LCT.

Col had won first prize for his home brew receiver at the Field Day. For completeness I have included a stock image of the dip meter. Definitely a blast from the past! Both Col and Sandy were 39 years younger then!



This months 'Blast' is taken from the 2011 and the 2016 editions of Oxtales (10 and 5 years ago)

In September 2011 Henry VK2ZHE was President, Vice President Bruce VK2HOT, Secretary John VK2KC and Treasurer was John VK2KHB. The club had 42 Financial Members.

The 2011 AGM was attended by 28 members. John VK2KHB after giving years of service as Treasurer did not stand and a new member Keith VK2FKJA (SK) was elected to be treasurer and Public Officer.

The photograph below is of the 2011-2012 Executive Committee.



The 2011-2012 Executive Committee L to R: John—Secretary (VK2KC), Bruce—Vice President (VK2HOT), Henry— President (VK2ZHE), Arthur— Repeater Chairman (VK2ATM), Bill— Committee man and Welfare Officer (VK2ZCV) (SK), Keith— Treasurer and Public Officer (VK2FKJA) (SK). Not pictured David (VK2DFN)

The Club had a successful Remembrance Day Contest as outlined in the report below.

Remembrance Day Contest

Members of ORARC again participated in the 2011 RD contest, on Saturday & Sunday 13/14th August, 2011.

The team, comprising: Henry VK2ZHE, Bruce VK2HOT, Barry VK2FBRG, Neil VK2EI, Arthur VK2ATM, John VK2KC, Keith VK2FKJA, and Bill VK2ZCV, operated from the club's caravan sited at Henry's QTH. They netted 120 contacts in the RD

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contest, but in the late afternoon, their efforts were thwarted and cut short when a severe electrical storm and very heavy rain forced a close-down at 1700 hours on the Sunday. Last contact was made as the rain static built up to 40 over S9!

Three of the club members are in photograph below working in the club's communication caravan.



From left to right Barry VK2FBRG (now VK2LBG), Keith VK2FKJA (SK) and Bill VK2ZCV (SK)

Amongst the gifts that Henry received was a special trophy awarded in recognition of Henry's long-standing, and well known involvement in all things associated with Amateur Radio. The trophy was formally presented to Henry by a long-time friend, John Thyrd (VK2BBC).

The trophy was suitably inscribed: "Henry, In recognition of your attaining the age of 60 years, your wisdom, knowledge, and position as a luminary in the field of Amateur Radio, not to mention being an all-round good bloke, the International Telecommunications union (ITU) the Wireless Institute of Australia (WIA) and the Australian communications Authority (ACMA) have unanimously decided that your contribution to the science of Amateur Radio be recognised by the conferring upon you the responsibility of Custodian of Two Metres."

The trophy and cake are pictured below:

September 2011 was also a special month for Henry VK2ZHE as the report below details:

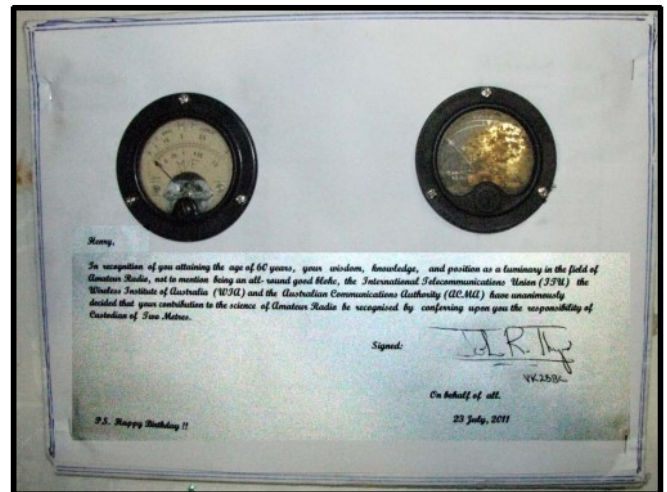
Surprise Party for President!

Perhaps one of ORARC's recently best-kept secrets was the arrangements made by Margaret, our President's sister, in organising a surprise party to help Henry (VK2ZHE) celebrate his 60th birthday.

Members kept the secret for quite some months and then, on the appointed date and hour (23rd July 6.00pm), converged on a function room at the Port City Bowling Club to await Henry's arrival.

Henry did receive a surprise to see so many of his friends, relatives, and of course, ORARC members, assembled for the function.

An attractive and tasty cake, was tailor-made for the event.



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In September 2016 Henry VK2ZHE was President, Vice President Paul VK2ICQ, Secretary Jim VK2VIV and Treasurer was Larry VK2CLL. The club had 69 Financial Members.

The major activities were the International Light House and Lightship Weekend and the Remembrance Day Contest.

The club was also very pleased to receive a replacement for its aging generator from Arthur VK2ATM.

Donation by Arthur VK2ATM of Honda inverter Generator to ORARC

After the Lighthouse weekend Arthur Monck VK2ATM very generously purchased a new Honda EU20i inverter generator and donated it to the club. A very appreciative group of members thanked Arthur for his generosity at the club's 3rd of September monthly general meeting. The photograph taken at the meeting shows some of the members with Arthur and the new generator. Arthur supplied the generator with its custom made protective cover and a service pack. As shown in the photograph below.



Editor's note: It would be an interesting exercise for members to name the fellow members in the photograph.

International Lighthouse and Lightship
This year the International Lighthouse and

Lightship Weekend and the Remembrance Day contest took place over consecutive weekends in August 2016. This enabled the club to operate VK2BOR for 24 hours in both events at different locations.



Barry VK2LBG, Jim VK2VIV and Lyle VK2SMI outside the security compound showing the cramped conditions.



Dennis VK2DAM, Dave VK2AYD and Arthur VK2ATM share a moment.



Larry VK2CLL's farm was the location of the Remembrance Day Contest.

Continued on next page

Equipment from the Past

Following on the theme of old military equipment that was acquired by amateurs on the disposal market, is the WS Number 128 Backpack Transceiver, pictured below which replaced the WS 108 featured the last issue of Oxtales.

WS No.128 BACKPACK TRANSCEIVER



The Wireless Set Number 128 was an Australian made backpack radio used by the Australian Army. The frequency coverage was 2.0 - 4.5 MHz in one band, and had variable frequency tuning. It also had 3 crystal channels for the transmitter and receiver.

The transmitter power output was about 0.25 to .36 watts, AM, MCW, and CW and loaded into a normal whip or into a long wire aerial.

The radio was made by Tasma Radio (Thom & Smith Ltd, Mascot, NSW) in 1946 and the Mark 2 version in 1952 and by AWA. Power was supplied It from a dry battery block type WBA0200 that provided 3 volts DC, and 162 volts DC.

For fixed or vehicle operation, there was a

vibrator power supply available (Vibratory Unit No.3) that was built into the battery box. The radio was tropicalised and was waterproof. It was designed in 1944 as a replacement for the WS No. 108 (the Australian version of the British WSN0.18), and entered service in 1946. It was used by the Army in Korea, and was eventually replaced from 1955 by the A510.

History of WS 128 Radio

Development of the Australian Wireless Set No. 128 started in early 1944 with approval for production given in July 1945. Issue to units was only after the World War II had ceased. It replaced the Australian No.108 as an High Frequency (HF) manpack set until the introduction of the A510 in 1955, although Very High Frequency (VHF) FM sets such as the AN/PRC-9, -10 and CPRC-26 were introduced in Australia in the early 1950's.

The Wireless Set Australian, No. 108 was Australia's principal manpack set in the early days of the Korean conflict (1950-1953). There were two variants the MK-1 and MK-II, differing by the turns indicator on the antenna tuning unit. The MK-II variant was attached to the operator by shoulder straps instead of a frame thus bringing the centre of gravity closer to the operator, as shown in the illustrations below.



MK- I



MK-II

The weight of a complete manpack was about 16 Kg a not inconsiderable weight to carry in the field under operational conditions.

In order to operate *Continued on next page*

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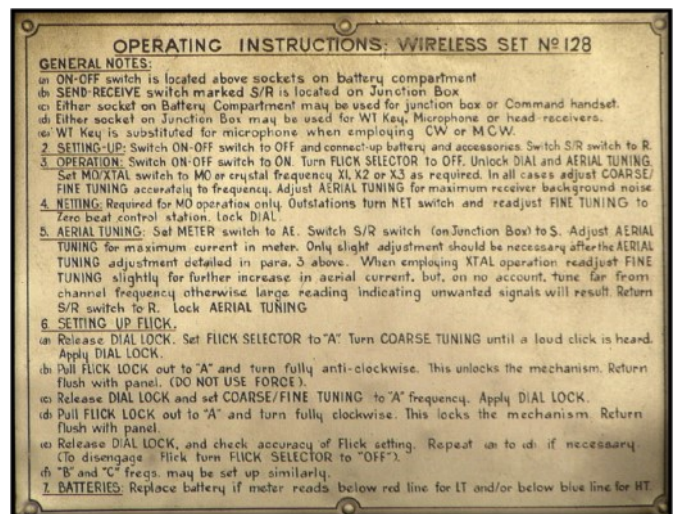
with existing sets and to provide long range sky-wave communication the set operated on CW, MCW and R/T (AM) in the frequency range of 2.0 - 4.5MHz either MO (Manually selected) or crystal controlled. The RF power output is given as approximately 0.36watt. Miniature 1.4 volt valves were used and in its construction miniaturisation was carried out as far as possible. In addition to the operation of dry batteries, provision was made for operation from a 6 volt vibrator power supply (Unit HT Vibatory No.3 Aust.) which is interchangeable with the battery compartment for use as a ground station.

The WS 128 was tropicalised which involved extensive sealing and waterproofing as it was found that the principal Australian manpack during the New Guinea campaign, the No.108, was not sealed, leading to tropical moisture quickly making the sets inoperative and requiring considerable resources to dry the sets.

As a part of the Australian policy to have a complete inventory of sealed sets, design of the second Australian generation manpack, the Wireless Set No.128, commenced in 1944 and was approved for production in July 1945. With the end of World War II in August 1945, the urgency for the set no longer existed and it did not enter service until 1946.

The No.128 was the main Australian manpack during the Korean War and was supplemented by the upgraded version, the Wireless Station No.128 Mk.II in 1952. These sets remained in service until progressively replaced by the Wireless Station A510 from 1955. Ranges of 4 to 5 miles (6 to 8 Km) in open ground and 2 to 3 miles (3 4 Km) over wooded or hilly ground could be achieved using an 8 ft (2.5 meter) vertical aerial. Much longer distances could be achieved using wire aerials.

Pictures of some of the various accessories for the WS 128 are shown on the this page.



Acknowledgements:

Tube Radio Australia Current Projects
Wireless set No 128 Mk II : Australian Army |
Australian War Memorial (awm.gov.au) WS-128
(vk2bv.org)

Continued on next page

MEMBERSHIP REGISTER

Membership List as at 4 September 2021

No.	Cat	Surname	Given Name	Spouse	Call	Location	Phone
1	D	ALLAM	DEREK	(CLARE)	VK2BTX	CUNDLETOWN	0403 796 102
2	D	ALLAM	ROBERT		VK2CDX	CUNDLETOWN	
3	O	BAILEY	JOHN	(FLORENCE)	VK2KHB	PORT MACQUARIE	02 6582 2192
4	O	BAILEY	ROD		VK2AJ	PORT MACQUARIE	0428 670 001
5	D	BAYLISS	KEITH	(DEBBIE)	VK2PTL	COOPERNOOK	0478 606 464
6	D	BLACKMORE	MARK		VK2XOF	BAULKHAM HILLS	02 9639 0663
7	L	BLYTH	BOB		VK2XIQ	TELEGRAPH POINT	-
8	D	BOYD	WADE		VK2EST	WINGHAM	0400 589 265
9	O	BREWSTER	DAVID		ZL3DS	LAKE CATHIE	0407 749 748
10	D	BRICE	GRAHAM	(CYNTHIA)	VK2VV	SCONE	02 6545 0411
11	O	BRUCESMITH	SANDY	(KAY)	VK2WH	PORT MACQUARIE	0435 356 466
12	D	CAMPBELL	JAMIE		VK2YCY	HAMILTON	0418 628 321
13	O/F	COLLEDGE	PAUL	(PAULA)	VK2ICQ	PORT MACQUARIE	02 6580 9912
14	O/F	COLLEDGE	PAULA	(PAUL)	VK2PDC	PORT MACQUARIE	02 6583 8829
15	O	COURT	RICHARD	(LINDA)	VK2CHC	PORT MACQUARIE	02 6581 5658
16	D	DORAHY	ALEX	(ANNE)	VK2HBF	TOORMINA	0400 849 098
17	D	ECCLESTONE	BOB	(DIANA)	VK2ZRE	KEMPSEY	0419 414 412
18	D	EKERT	BRUCE	(YULIA)	VK2EM	FORSTER	0414 532 496
19	O	EKMAN	JOHN	(MELLISSA)	VK2VEX	WAUCHOPE	0417 448 998
20	O/F	FLETCHER	CAROLINE	(PETER)	VK2CZF	PORT MACQUARIE	02 6584 5191
21	O/F	FLETCHER	PETER	(CAROLINE)	VK2HPF	PORT MACQUARIE	02 6584 5191
22	D	FOX	JOHN		VK2AEG	WAHROONGA	02 8711 0100
23	O	FRAPPPELL	GRAEME	(BAMBI)	VK2GCF	PORT MACQUARIE	0490 088 048
24	O	FROGGATT	DARREN	(KRISTY)	VK2MIA	PORT MACQUARIE	0488 01 8102
25	O	FROST	ROBERT	(SUSAN)	VK2CRF	PAPPINBARRA	02 6587 6129
26	D	GARLAND	JOHN		VK2CJG	JEWELLS	02 4948 1950
27	O	GILSON	BARRY	(FAY)	VK2LBG	PORT MACQUARIE	02 6583 8814
28	D	GREENE	DENNIS		KN4VKT	FLORIDA USA	+1 321 295 1184
29	O	HALL	RICHARD		VK2BXO	PORT MACQUARIE	02 6582 6588
30	O	HANSEN	JOHN		VK2AYQ	PORT MACQUARIE	0427 407 973
31	L	HARDING	DAVID		VK2AIF	WAUCHOPE	02 6586 1947
32	D	HARPER	JOHN	(VIVIANE)	VK2LJ	VICTORIA	0417 254 763
33	D	HIRSCHEL	ALLAN		VK2OK	DOUBLE BAY	0415 259 777
34	D	HUTCHESON	COLIN	(PAULINE)	VK5DK	MT. GAMBIER	08 8725 5527
35	D	JANES	LES	(BEVERLY)	VK5JL	SALISBURY HEIGHTS	08 8281 3878
36	D	JOHNSON	STEVE		VK2SJJ	BELLINGEN	0466 334 626
37	O	JONES	PAUL	(SANDRA)	VK2DEL	PORT MACQUARIE	02 6584 3772
38	D	KEIR	ANDREW	(BARBARA)	VK2AAK	DARAWANK	02 6554 3498
39	O	KUCERA	PETER		VK2MPK	WAUCHOPE	0429 229 290
40	L	LINDSAY	LARRY	(PENNY)	VK2CLL	HUNTINGDON	02 6587 1155
41	O	LINDQUIST	IAN	(BERNADETTE)	VK2GL	PORT MACQUARIE	0414 419 462
42	L	LUNDELL	HENRY		VK2ZHE	PORT MACQUARIE	02 6582 0534
43	D	MACNAUGHTON	JENNY		VK2BA	MUDGE	02 6372 4053
44	O	MARE	HANS		VK2MRK	PORT MACQUARIE	02 6582 7080
45	O	MARTIN	CRAIG	(JENNY)	VK2CSM	SANCROX	02 6585 3452
46	D	McADAM	PETER		VK2EVB	COFFS HARBOUR	02 6652 7160
47	O	McGUIRE	MARK		VK2FMGM	PORT MACQUARIE	02 6583 8875
48	O	McLEAN	JOHN	(CORRINE)	VK2KC	PORT MACQUARIE	02 6584 6220
49	O	MEADE	DENNIS	(SUE)	VK2DAM	PORT MACQUARIE	02 6582 2998
50	D	MEEHAN	TERRY		ex-VK2KL	KEMPSEY	-
51	O	MELVILLE	STUART		VK2KSM	PORT MACQUARIE	0419 043 316
52	O	MESSINA	TOBY		VK2XTX	PORT MACQUARIE	0417 293 377
53	L	MONCK	ARTHUR		VK2ATM	PORT MACQUARIE	0459 679 425
54	O	MULLINS	RAY	(LYNNE)	VK2JU	PORT MACQUARIE	0432 559 400
55	O	NEWHAM	LAURIE	(ROBIN)	VK2ELN	PORT MACQUARIE	02 6583 5387
56	O	NEIL	JIM	(CAROL)	VK2VIV	PORT MACQUARIE	0487 812 481
57	D	NIVEN	TREVOR	(BETH)	VK5NC	MT. GAMBIER	08 8723 2432
58	D/F	O'BRIEN	GRAHAME	(JUDY)	VK2FA	CARDIFF	02 4954 8688
59	D/F	O'BRIEN	JUDY	(GRAHAME)	VK2HZV	CARDIFF	02 4954 8688
60	D	OLSEN	KIMBERLY		VK2KMI	GUNNEDAH	04 5515 5798
61	D	OSBORNE	RICHARD		VK2OKR	LEMONTREE PASSAGE	0429 824 951
62	D/F	PETTET	JOHANNA	(STEVEN)	VK2FJMM	ILARWILL VIA MACLEAN	02 6645 5290
63	D/F	PETTET	STEVEN	(JOHANNA)	VK2ZVG	ILARWILL VIA MACLEAN	02 6645 5290
64	L	PILLEY	DAVID		VK2AYD	KING CREEK	02 6585 2647
65	O	PISANI	VIC	(MEREDITH)	VK2UVP	BONNY HILLS	02 6584 8361
66	D	PRATT	PETER		VK2PX	PENNANT HILLS	0418 965 962
67	O	RAE	THOMAS		VK2ATR	PORT MACQUARIE	0409 808 528
68	D	RAY	ROBERT		VK2ZWW	SINGLETON	0412 573 861
69	O	ROMAINE	PAUL		VK2UPR	PORT MACQUARIE	0428 466 075
70	O	SANDERS	BILL	(SUELENE)	VK2FWHP	REDBANK	0437 004 228
71	O	SMALL	ROBERT	(LYNN)	VK2BIG	LAKE CATHIE	02 6584 8148
72	D	SWINDLEY	RON		VK2DDQ	KEMPSEY	0417 299 397
73	O	SMITH	LYLE	(JEANNINE)	VK2SMI	WAUCHOPE	02 6585 2497
74	D	SMITH	MURRAY	(MARGARITA)	VK2LAT	RAINBOW FLAT	0423 781471
75	O	SMITH	STEVE	(HELEN)	VK2IS	RAWDON ISLAND	0404 612 126
76	O	SOUTHWELL	IVAN		VK2IJS	PORT MACQUARIE	0439 611 452
77	O	TERRY	COL	(KATHLEEN)	VK2LCT	YIPPIN CREEK	0429 002906
78	L	THATCHER	TREVOR		VK2TT	WAUCHOPE	02 6585 2278
79	D	THOMPSON	DES	(BETTY)	VK9FLHI	LORD HOWE ISLAND	02 6563 2152
80	D	THOMPSON	LARRY	(KATHLEEN)	VK2LJT	TUNCURRY	02 6555 7994
81	D	THRING	HAYDEN			TEMAGOG	0435 287227
82	O	WALKER	BRUCE	(GWEN)	VK2HOT	PORT MACQUARIE	02 6583 8360
83	D	WALKER	STUART		VK2BMX	BEECROFT	02 9869 0515
84	D	WALSH	STUART	(JENNIFER)	VK2WAL	TUNCURRY	0409 531 310
85	O	WARD	MICHAEL	(SEREENA)	VK2FMDW	PORT MACQUARIE	0418 291 276
86	D	WILSON	DIANE		VK2DNE	LEMON TREE PASSAGE	0429 845 111
87	O	WINCHESTER	JOHN	(PAULINE)	VK2NJJ	PORT MACQUARIE	02 6580 3031
88	O	WYNN	STEPHEN	(LYALLE)	VK2ZSW	YIPPIN CREEK	02 6585 3327
89	D	YORSTON	ROBERT		VK2CAN	ROSEVILLE	02 9426 3727

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