OXTALES

First published 1980

Newsletter of the Oxley Region Amateur Radio Club Inc.,
PO Box 712 Port Macquarie 2444
Club e-mail address: vk2bor@orarc.org
Club Website: http//www.orarc.org

ORARC's Forty-fourth Anniversary Year

Club Nets on VK2RPM
146.700MHz
(CTCSS 91.5Hz)
Every Sunday at 0830
Every Thursday at 1930

March 2015

Compiled by VK2TT & VK2AYQ

PRESIDENT: Lyle Smith	VK2SMI	6585 2497
VICE PRES: Charles Edmondson	VK2KCE	6584 0495
TREASURER: Larry Lindsay	VK2CLL	6587 1155
SECRETARY: David Hogan	VK2FRAB	6582 3006

President's Report

The combined fox hunting practice day and VHF/UHF field day was held in January with about nine members attending. Three members participated in the fox hunt activities, Craig VK2ZCM, Steve VK2HOO and Lyle VK2SMI. The foxes were hidden by John VK2NJJ, and they were well hidden, as by the end of the day we sported scratches each on arms and legs from the thorns from the bushes they were hidden in.

While watching each other find the elusive foxes, it was interesting to note that we even pushed the fox aside looking for them. A bonus point to Bill VK2ZCV, for that camouflaged paint job!

It was noteworthy to mention that although Craig was using a commercial fox tracking setup, including a four element Yagi, and I was using an ex-TV field-strength meter and a three-element Yagi, that Steve, using a Baofeng UV-5R with standard antenna, was for the most part finding the fox only minutes behind us "fully kitted hunters". That just shows that you don't need all that technology to do a simple job.

The Club's Communication Caravan was taken to John Downes Park for use in the
(continued 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

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

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

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

VK2RCN-1 (APRS Digipeater)
SX 145.175MHz 1200bps

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Remember the John Moyle Memorial Field Day Saturday 21 March Mcinherney Park Port Macquarie. Communications Van set up 9am assistance required.

Down The Coax

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

Monthly General Meeting
Saturday 7 March 2015 2:00 pm

Friday Night Get-Together
Friday 20 March 2015 7.00 pm

John Moyle Memorial Field Day
Saturday 21 & Sunday 22 March 2015
21 March Mcinherney Park Port Macquarie
Communications Van set up 9am

Monthly General Meeting
Saturday 28 March 2015 2:00 pm
(Note: 1 week early as 4 April is Easter Saturday)

Urunga Convention
Saturday 4 and Sunday 5 April 2015

Friday Night Get-Together
Friday 17 April 2015 7.00 pm

ANZAC Day Activity
Saturday 25 April 10.00 am to 4.00 pm

Monthly General Meeting
Saturday 2 May 2015 2:00 pm

Friday Night Get-Together
Friday 15 May 2015 7.00 pm

Monthly General Meeting
Saturday 30 May 2015 2:00 pm
(Note: 1 week early as 6 June is Field Day)

ORARC Field Day
Saturday 6 and Sunday 7 June 2015

email Directory

m

Net Controllers' Roster

Nets on Voice Repeater VK2RPM 146.700 MHz

Sundays (0830 Local)		**Thursdays** (1930 Local)	
March 2015			
VK2CHC	Mar - 01	VK2EM	Mar - 05
VK2TT	Mar - 08	VK2ZHE	Mar - 12
VK2CHC	Mar - 15	VK2ICQ	Mar - 19
VK2TT	Mar - 22	VK2EM	Mar - 26
VK2CHC	Mar - 29		
April 2015			
VK2TT	Apr - 05	VK2ZHE	Apr - 02
VK2CHC	Apr - 12	VK2ICQ	Apr - 09
VK2TT	Apr - 19	VK2EM	Apr - 16
VK2CHC	Apr - 26	VK2ZHE	Apr - 23
		VK2ICQ	Apr - 30
May 2015			
VK2TT	May - 03	VK2EM	May - 07
VK2CHC	May - 10	VK2ZHE	May - 14
VK2TT	May - 17	VK2ICQ	May - 21
VK2CHC	May - 24	VK2EM	May - 28
VK2TT	May - 31		

email Directory (cont'd)

(from front cover)

VHF/UHF field day, and also to act as a support base for the other activities.

On arrival, two masts were erected with Henry's VK2ZHE, 2-metre Yagi and 70 cm phased array on one mast, and a new homemade 6-metre dipole on the other. Henry said he was hesitant about using a bigger 6 metre antenna due to the weather conditions and it was good planning, as the wind at the park was quite heavy at times and both masts were testing their strength ratings.

Communications Caravan set up

Noon was the start time for the field day and although several non-contest contacts were made prior to this, the bands were quiet of contacts for the first hour of the contest.

Fox inspection by Lyle VK2SMI and Steve VK2OO

Craig VK2ZCM prepares a hound

Another fox hunt day was held in conjunction with the antenna shootout on the 15th of February. Fifteen members in total participated in the day's activities. The club's communications caravan was located at the sports field on Tuffins Lane to support both activities. Thanks to Barry VK2LBG, for getting it there.

Bill VK2ZCV and Arthur VK2ATM inspect the set up at Tuffins Lane

The fox hunt started around 10am with four club members participating. Several hunts were achieved, with the end results being Craig VK2ZCM, first, followed by Larry VK2CLL. Another good practice session before the ORARC field day.

The midday break for the delicious lunch was next, with Henry VK2ZHE, organising the sausages, bread and other bits for lunch and with Richard VK2CHC ready at the portable BBQ.

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Richard VK2CHC prepares a sizzling lunch

With our tummies filled, the day turned to the shootout and the antennae were labelled and transported to the transmitter end of the field with John VK2KC controlling there. Arthur VK2ATM organised his spectrum analyser to take the measurements. These results are shown in this edition of Oxtales relating to the benchmark antenna.

A distant view of the end of the field where antennas were set up for testing.

Yagi under test held by Rob VK2CRF

Apart from those already listed, members attending were Paul VK2ICQ, Paul VK2DEL, Bill VK2ZCV, David VK2FRAB, Rob VK2CRF, Paul VK2UPR, and Mark VK2FMGM. Thanks for the assistance setting-up, hiding foxes, the antenna shootout, and packing up.

John VK2KC, Bill VK2ZCV and Craig VK2ZCM watch from the marquee.

Arthur VK2ATM uses the analyser to quantify the antenna results.

The field day at Wyong this year was on the 22nd of February. Several members from ORARC attended and I am sure lots of money was spent. Friendships were caught up on and generally an informative day was had by all. As has been the recent weather, it rained most of the day.

Jaycar's absence was noted by most attending and the answer was given as "after last year's poor sales, they declined to attend this year". The disposal area was down from previous years and speculation was that online auction sites may be contributing to this downturn with the predicted weather.

The John Moyle field day will be held on the 21st of March and don't forget that April's meeting will be held on the Saturday the 28th March due to Easter.

— Lyle VK2SMI

(President ORARC)

ORARC Antenna Shootout Results 15th February 2015

On the 15th of February, ORARC held an antenna shootout at the sports fields in Tuffins Lane. The day was clear and the fields were clear of public.

The club's communications caravan arrived just before 10am and all hands went to work setting up the van with awning for shade and the transmit and receive antennae for the shootout. The intention was to place a 3x3 metre portable gazebo at the other end of the sports field, approximately 300 metres away for the transmitter and staff, but I think Henry VK2ZHE overdid his part in this organisation as we had a 20x50 marquee ready to go.

This will do the job we thought. It should be large enough!

After moving the transmitter to the other end of the field, Lyle set about labelling the antennae to be tested, while Arthur set up his spectrum analyser for the receiver side of the operation. All was ready for operation after lunch… by the way it was superbly cooked by

(continued on page 6)

ORARC Antenna Shootout				15-Feb-15	2 Metre	
Name	Callsign	Antenna Type (Yagi/Vertical/desc)	H V	Results		Position
ORARC BENCHMARK	VK2BOR		V	-47		
ARTHUR	VK2ATM	2/70 MAG77EL		-5		12
HENRY	VK2ZHE	5EL YAGI	H	0.5		4
PAUL	VK2ICQ	1/4 WHIP		-4.5		11
PAUL	VK2ICQ	NL77BL		-5		12
PAUL	VK2ICQ	NR770RB		-1		5
LARRY	VK2CLL	2/70 MAG77EL		-1.5		6
CRAIG	VK2ZCM	2/70 VERT		-1.5		6
LYLE	VK2SMI	SG7500		-2.5		8
ROB	VK2CRF	9EL YAGI	H	4.5		1
BILL	VK2ZCV	DUAL BAND JPOLE		-4		10
CRAIG	VK2ZCM	3EL YAGI	H	-3		9
CRAIG	VK2ZCM	3EL YAGI	V	-9		14
PAUL	VK2DEL	7400 COPY		1		3
JOHN	VK2KC	DIAMOND 7400		1.1		2

ORARC Antenna Shootout				15-Feb-15	70 cm	
Name	Callsign	Antenna Type (Yagi/Vertical/other)	H V	Results		Position
ORARC BENCHMARK	VK2BOR		V	-38		
ARTHUR	VK2ATM	2/70 MAG77EL		-2		7
PAUL	VK2ICQ	NL77BL		-8		9
PAUL	VK2ICQ	NR770RB		0		6
LARRY	VK2CLL	2/70 MAG77EL		1		4
CRAIG	VK2ZCM	2/70 VERT		1		4
LYLE	VK2SMI	SG7500		-2		7
BILL	VK2ZCV	DUAL BAND JPOLE		4		2
CRAIG	VK2ZCM	COLINEAR		-24		10
JOHN	VK2KC	DIAMOND 7400		2		3
PAUL	VK2DEL	7400 COPY		5.5		1

(from page 5)

Richard on the club's portable BBQ. We could not have done better, sausage sandwiches, cold drinks and friends!

12:30pm arrived and with all the antennae labelled, they were transported to the transmitter site ready for the shootout to start. One by one each antenna was tested and the results were tabled comparing each antenna to the benchmark antenna. The results are shown in this edition of Oxtales (Please see previous page).

After all the antennae were tested we packed up the transmitter site and regrouped back at the caravan for the results. Some were not excited with the results of their antenna as they were quoted better figures by the retailer/documentation. Others were just happy to confirm that the shootout had confirmed what they already knew.

The shootout was now completed and it was time to return to our QTH's. So all hands to the packing up, and the caravan was returned to the storage mode and towed away for the next activity.

- Lyle VK2SMI

Children come up with some amazing stories as this piece by Lyle VK2SMI shows.

New Generation Holdens

I have always been a Ford supporter, probably a result of my father's influence when I was young and even though I own 6 Mitsubishis I still cheer for the Blues on Bathurst race day.

Recently, you may have seen the new generation of Holden ads on TV and it interested me with the ideas suggested by the children in these ads. The main one was the 1500 Kilometres per second and I just had to throw the numbers around and the results are: 5.4 million Kph, 4400 times the speed of sound, 5.2 seconds from Sydney to Perth and back, 9.3 seconds to circumnavigate Australia, 26.7 seconds to travel around the world, 55.4 hours to the sun and back.

Now this is all theory because they don't say how far it will go on a tank of fuel and if you allow for traffic lights, road works, speed cameras and the lack of roads on some of these trips, it may very well be a lost cause to have a car that fast, and don't forget if you go to the sun you will have to go during the night or you might melt the tyres. NASA might be interested in the technology because it would be just a short 10.4 hours to Mars, no need for cryogenics or one way/no return trip.

All that been said, I will, at the next car purchase, consider a change to Holden.

— Lyle (VK2SMI)

Has Your Licence Expired?

Recently, ORARC received an email from the Wireless Institute of Australia, advising that hundreds of amateur licences have not been renewed. This prompted an email broadcast to all members, but just in case you missed it and have not checked your licence, or can't remember when it is due, I urge members to check their licence.

Remember, not only is it illegal to transmit without a current licence, you run the risk of losing your call sign.

—Lyle (VK2SMI)

For all Star Trekers

Vale Leonard Nimoy

On the 27th of February 2015 Leonard Nimoy, better known as Mr. Spock from Star Trek the original series, passed away at the age of 83.

He was also a film director, poet, singer and photographer, and in multiple film, television and video game sequels.

I grew up watching Star Trek and remember how realistically he played the part and convincing the viewer he was actually from another planet.

Several days before his passing, he "tweeted" his last words, "A life is like a garden. Perfect moments can be had, but not preserved, except in memory."

As Spock would say, "Live Long and Prosper".

— Lyle Smith (VK2SMI)

Wyong Field Day in Pictures

Thanks to Henry VK2ZHE for sourcing the photographs taken by Gary Ryan VK2ZKT Radio Supply Bellingen.

Old Military Radio on display. Who remembers using these sets?

Part of the Kurrajong Radio Museum's display

AN/PRC64 Delco 5300 C featured on page 8 Oxtales.

Who is the stand out ORARC member in his polo shirt? Those viewing this as a pdf file

Home brew equipment.

Some of the Trade displays Carol VK2FCSR from Radio Supply Bellingen. Who is that member filling his backpack?

RODA Antennas and ICOM.

Now that's a serious radio backpack!

'Flea Market items preloved!

The AN/PRC Delco 5300 C

Photograph taken by Gary Ryan VK2ZKT Radio Supply Bellingen. Item from the Kurrajong Display at the Wyong Field Day 22 February 2015.

The AN/PRC-64 was a true spy radio set, developed by Delco (US) in the early 1960s as a possible successor to the AN/GRC-109 (RS-1). It was intended for use by Special Forces (SF) and for espionage activities. The design was based on the Delco 5300 that was used by the CIA. It was extremely popular with the Special Operations Group of the Australian Army in Vietnam.

During their operational life, most of the PRC-64 units were upgraded to PRC-64A, which allowed faster burst transmissions in combination with the AN/GRA-71 burst encoder) that was connected to the 7-pin morse KEY socket.

Contrary to other spy sets of the same era, the PRC-64 was also suitable for voice transmission, hence the presence of a dynamic microphone.

The PRC-64 was an extremely compact unit for its time and measures only 25 x 13 x 12 cm. Even when packed together with the accessories in the canvas carrying bag, the set measures less than 35 x 14 x 14 cm and weights less than 3.5 kg including the battery. The unit is powered by an internal battery and is switched on by opening the top lid. The small size however comes at a price, as the HF output power is no more than 5 Watt (CW morse) or 1.5 Watt (AM voice).

Frequency selection of the PRC-64 is crystal controlled, limiting its operation to 4 preset channels. Receiver and transmitter each have their own set of 4 crystals to allow split-frequency operation. The frequency range is from 2.2 to 6.0 MHz. RX and TX frequencies are usually written in a table inside the top lid. The crystals were stored in a compartment behind the table.

Although the manual specifies a frequency range of 2 to 6 MHz, experience with a variety of units has shown that this set easily covers the 160-, 80-, and 40-meter amateur bands with no modification.

The Delco 5300 in aluminium lightweight case.

Tone burst recorder

Material was compiled from Crypto Museum web site. With additional information from Gary Cain W8MFL and Bryn Mawr PA 19010.
Del Thomas WL7AKZ

Blast from the Past

The following was first published in Oxtales July 2009 by longstanding member David VK2AYD. The statistics Dave quoted were interesting and I wonder how they may have changed today.

The Aging Amateurs *by David VK2AYD*

I've just finished the 'All Asia DX CW Contest'. Not the best as HF conditions were not good.

I won it back in '83 and thought I could do it again - ha ha. By Saturday midnight I was ready for bed!

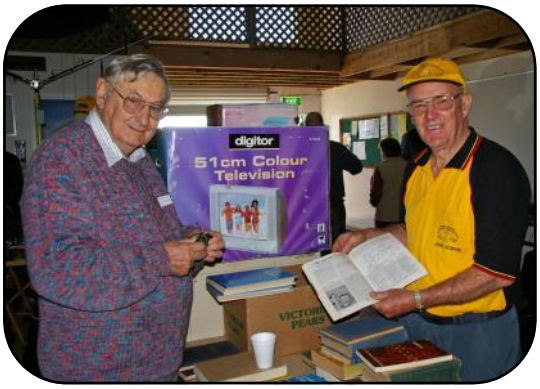
My head ringing from the static on the LF bands. The HF bands had long shut down, though I did work one JA on 10..!

The exchange was a signal report plus your age. Now statistics are revealed. The average age was 55. The oldest was 83. Only two stations under the age of 30. Perhaps CW is really dead. I'll try again next year.
73
David VK2AYD

How things change but have a similarity to the past.

1880 Optical Telephone Transmission Patent

Alexander Graham Bell and Sumner Tainter were granted a U.S. patent in 1880 for a wireless telephone transmission method they invented where telephone signals are transmitted to a receiving party by means of light propagating through air instead of electric current flowing through wires. Their method involved modulating a light beam by reflecting it off a diaphragm that vibrated in sympathy with sound waves. The angle of the reflected light beam moved from directly toward to slightly away from a light-sensitive receiver as the diaphragm vibrated, causing the received light energy to be amplitude modulated with sound intelligence. They originally called their optical telephone system a 'photophone,' but later changed the name to 'radiophone.' The American Bell Company was granted a patent covering improvements to the method in 1897. Modern fiber optic transmission systems differ in detail, but are closely associated with the Bell and Tainter method in that they both transmit intelligence by means of modulated light energy.



It seems like only yesterday! Three current members of ORARC at a club event in the past.

Your challenge if you wish to accept is to name the members and the event that they are attending.

WIA Matters

WIA Updates Bandplans - (6, 30, 40 and 6 metres)
Date : 21 / 02 / 2015
Author : Phil Wait - VK2ASD

Amateur Radio Bandplans are a voluntary operating code which divides the various amateur bands into segments, in order to minimise interference between often incompatible transmission modes and technologies. As technology progresses, and patterns of usage change, Bandplans need to be periodically reviewed and updated to ensure they meet current needs, and also that, as much as possible, band usage remains internationally harmonised.

Following a lengthy period of public consultation the Bandplan changes are now released as a "Draft for Adoption". If no serious deficiencies are identified the updated Bandplans will come into effect on the 15th March, 2015. The two metre and 70cm Bandplans are also under review, and are expected to be finalised during the second half of this year. Watch out for new information on those Bandplans in the Hot Issues section of this website.

The WIA would like to sincerely thank John Martin VK3KM and the entire Technical Advisory Committee for undertaking the difficult task of reviewing the Bandplans, and finding a workable solution to satisfy the various competing interests. Phil Wait VK2ASD.

ANZAC Centenary callsigns deadline
Date : 28 / 02 / 2015
Author : Jim Linton - VK3PC

All applications for the commemorative ANZAC suffixed callsigns issued by the WIA must be made fairly soon and certainly finalised before the end of March. The WIA Board has a deadline of March 31 for its ANZAC callsigns, with applications accepted online and filled in using the correct UTC day or days. The callsign applications are only for up to a week at a time.

If seeking an ANZAC callsign read the requirements and obligations which include eQSLing, logging and award eligibility. This information will not only be of interest to ANZAC stations, but they can mention them frequently on air and refer to the WIA website for full further detail.

ANZAC callsign bookings have been good and where overlaps in proposed dates have occurred, the majority of groups are showing consideration and have been flexible enough to adapt. Also a number of other clubs and individuals are to use the alternative AX callsign prefix, available this year for up to 48 hours. Following WIA representations the ACMA in recognition that this is the Centenary of ANZAC, will allow for the use of AX on Saturday and Sunday April 25 and 26.

The WIA recommends that if AX is used then a QSL card with that callsign be used to satisfy the many prefix and commemorative event hunters.

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VI8ANZAC very popular

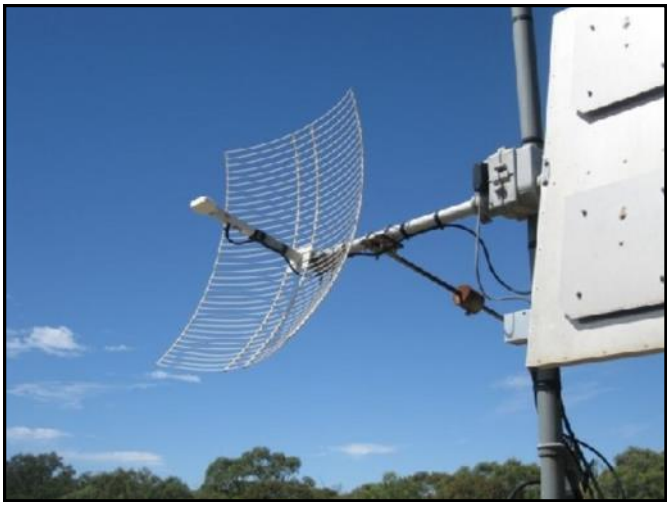
Date : 05 / 03 / 2015

Author : Jim Linton - VK3PC

The Darwin Amateur Radio Club (DARC) has completed its activation of the VI8ANZAC callsign as part of the reinactment of the journey by Albert Chalmers Borella to enlist in WWI. He went from Tennant Creek to Darwin, then to a sign-up point in Townsville in Queensland. Albert Borella served at Gallipoli in 1915, the Western Front in France and Belgium, and is the only person from the Northern Territory to be awarded the Victoria Cross.

DARC President Gary Gibson VK8GN reports that VI8ANZAC was put to air by 10 operators scattered across Darwin, keeping it on air until midnight local time from February 20 to March 3. There was a concentration on 40m, 20m, 15m and 10m using both SSB and CW. The callsign was greeted with plenty of interest on the bands. The total number of contacts was more than 1,000 with the QRZ.com hits about 7,400.

At the end of the journey by his grandson Richard Borella that was on foot, horseback and train, it was announced that Darwin's newest suburb would be named Borella. A series of VK state and territory callsigns are to be used during ANZAC 100 that are prefixed VI, have a state numeral and the ANZAC prefix



NASA Moon Bounce Signal Heard

Date : 07 / 03 / 2015

Author : Jim Linton - VK3PC

When the National Aeronautic and Space Administration (NASA) Jet Propulsion Laboratory (JPL) decided to bounce a signal off the moon, it had listeners around the world including at Mildura and Geelong. On Tuesday March 3 between 0600 to 0900 UTC, the JPL tested its Lunar Ranging Experiment. With JPL using 20 kilowatts into a 34-metre antenna, it was suggested that reception of the reflected signal would be possible on a basic receiving antenna.

This inspired Noel Ferguson VK3FI in Mildura, who decided to have a listen. As his three metre dish was out of service, he decided to try an old "grid pack" pay TV antenna to pick up the reflection on 2115 MHz. The initial noise floor was about strength five. The reflected signal first appeared as the moon rose over the tree line at about 0820 UTC, with the moon's distance at that time about four hundred and three thousand kilometres from earth. Signals in Mildura peaked at strength seven using the FT847 as an IF on 164 MHz. Noel VK3FI reports that reception continued through to 0900 UTC, when the JPL test was terminated.

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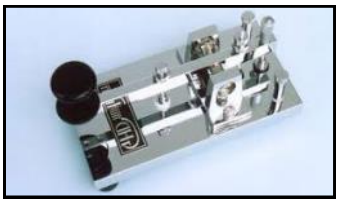
Chas Gnaccarini VK3PY at Lara near Geelong also checked the signal using a spectrum analyser, 1.2 metre dish antenna and pre-amplifier. He saw a huge signal, 20dB above the noise.

MORSE CODE
and Amateur Radio Licences
From the VK2FAQ website



It is no longer necessary to pass an exam in morse code for an Amateur Radio licence in Australia.

However morse is still used by amateurs and there are nightly Morse Practice Broadcasts (normally transmitted on 80 and/or 2 metres) transmitted especially for those learning the code. In addition, some cities have 24 hour continuous Morse practice beacons that you can tune into at any time. Listen on 3.699 MHz to hear VK2WI transmitting practice morse at a range of speeds. Also see the KA7NOC website under the CW link.

How the morse code requirement was dropped

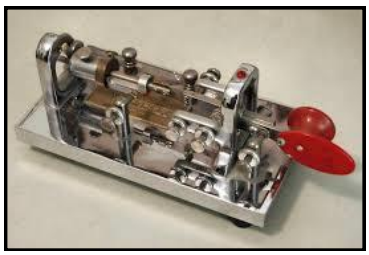
There was a growing recognition during the 1990s that few prospective radio amateurs accepted the validity of the morse proficiency requirement for HF licences. Some or all WIA Divisions conducted a survey of members in late 1995 to see whether their members agreed with the morse requirement.

The morse code test was widely seen as out of step with today's technology and the interests of today's newcomers to the hobby. There were movements afoot in New Zealand, Europe and the USA during the next few years, culminating in an announcement by the American radio administration (FCC), that from April 2000, the morse speed requirement would be reduced to 5 wpm. Many other countries followed suit, including Australia and New Zealand and many European countries. More details were published by the WIA.

The morse test requirement was finally removed as a treaty requirement by a World Administrative Radio Conference in 2003.

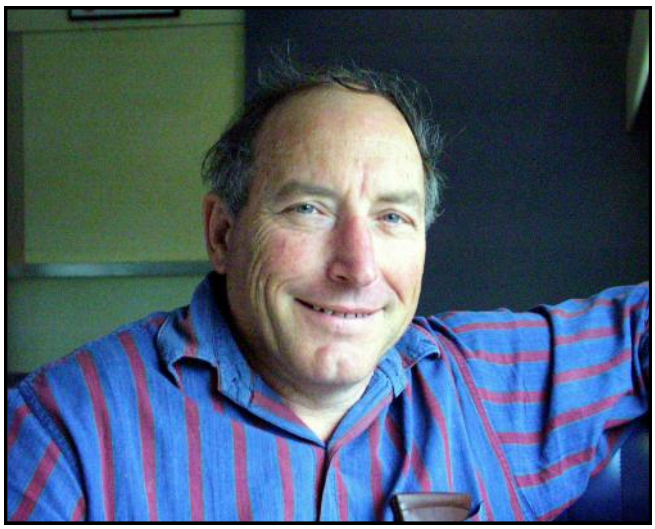
The morse test was left to individual countries to apply if they wished. In Australia, the ACMA agreed to remove the requirement for morse tests as of 1 January 2004.
This is nevertheless *not* the death of morse code as an active mode on the amateur bands. Morse is too useful a mode for it to be dropped by amateur radio. Using morse code an amateur can bypass language differences and overcome interference and crowded band conditions that would make communications impossible on any other mode.

Morse will continue to be the most fundamental of the digital modes, for use under the worst possible radio conditions such as Earth-Moon-Earth amateur communications. It will also continue to be used for low power communications (QRP), where the simplest transmitters simply turn a single radio signal on and off and there is no need for the complexities of voice modulators.



Did you know that our club member David VK2AYD holds the equivalent of many Olympic Gold Medals as a winner in world wide Morse Contests?(Editors note)

Silent Key: David Edwin Macnaughton VK2BA



David passed away peacefully at the Dorrigo Multi Purpose Health Service on the 25th of February 2015, aged 71 years.
David was born in Cremorne, Sydney on the 2nd of June 1943. He was the only child of Lorna and Naughton Macnaughton VK2ZH.

In David's early years, his family regularly moved house. David spent time in Richmond, Wahroonga, Lindfield, Killara, Newport, Pymble, West Pymble, Gordon, St Ives and Mona Vale.

In 1949 at the age of 6, he suffered from Polio and spent a 4 week stint in hospital.

In 1954 at the age of 11, David travelled to New Zealand with his mother, his first overseas trip. He remembered the journey across the Tasman on the Wonganella and often spoke of the lovely music that had played live on the ship. He particularly remembered being put to bed one night early as his mother played Bridge with others in the guesthouse lounge. This turned out to be a massive stroke of luck, as from his room, he witnessed the Mt Nangar-Hoe volcano erupt, a spectacular scene with great rocks and lava belching from the volcano. Needless to say, he did not get much sleep that night. The adults never saw it.

Scouting played a major role in David's life. He started cubs at 1st Gordon then after completing Scouts and Venturers went on to become a leader at 1st Gordon Scouts and also West Pymble. He remained actively involved with the 1st Gordon Scout Group for another 30 years. David's passion for the outdoors glowed and he regularly ran week long camps, campfire cooking courses and of course many bushwalks for the highly active Scout group. Many people have commented since his passing of the amazing knowledge he passed on and fantastic memories and experiences that were made through this period.

David was very successful with his studies. He received his Intermediate Certificate in 1958 on completing his 5th year and went on to the metropolitan business college in 1960. In this same year David purchased his first car, an Austin 7 which he adored. He often reminisced about the "tinkle" from the crank handle, a common "feature" of this vehicle.

David was always interested in anything technical with his love of radio and electronics stemming from his father. At the age of 17 he built a small television set from scratch using a green oscilloscope tube as the picture tube. For many of his classmates this was the first television they ever experienced.

David started a 5 year Technician Training Course with the Department of Civil Aviation in 1961 and, upon completion secured a full time role within the department. He held numerous positions in the Equipment Acceptance and Prototype sections within DCA (later to be known as Transport Australia, then as the Civil Aviation Authority and finally as Airservices Australia), a career spanning

over 30 years. David was well respected amongst his colleagues and had a reputation for producing a high level of workmanship and a fine eye for detail.

In 1961 David received his first call sign VK2ZVW. In his early amateur years he participated in many radio fox hunts. David could often be spotted driving the streets of Sydney in his VW Beetle with a pole emerging through a hole in the front of the windscreen with a wheel under the dash-board to turn the antenna. He was exceptionally creative and this led to much success within the sport. David was very active on air with his home built 2 metre AM transceiver and made many long distance contacts while mobile in the mountainous country surrounding Sydney.
In 1966 David joined the Coastal Mountain Walkers Bushwalking Club to get more experience to take scouts on walks. He fell in love with walking and this started a lifelong passion with the Australian bush. David led walks all over Australia and South West Tasmania. He was organising an extensive walk throughout the US and Canadian National Parks when he met Jenny through the club and they decided to marry. The paperwork for the planning was handed over to others but the trip didn't go ahead so David never made it to the US.

Family was very important to David. He always wanted a blue eyed, blonde daughter and in 1973 Jenny delivered their blue eyed, blonde daughter, Leonie. Two years later Andrew was born. He was a little human dynamo, taking after his father, into everything.

The family regularly travelled all over Australia from their home at Marsfield, camping in remote and rugged landscapes.

David studied bush regeneration at TAFE and lead a local group in Gordon with spectacular results, the group is still active to this day.

David enjoyed long distance running. He was a regular city to surfer and often spent his lunch breaks training.

The family shared David's interest in motor racing, and often attended race meetings at Amaroo Park and Oran Park This interest included several camping "experiences" on Mt Panorama at Bathurst.

David's amateur radio life was very important to him. In 1977 he passed the Morse Code exam and obtained his full license and new call sign VK2BA. Jenny remembers listening to him practice his Morse whilst drifting off to sleep.

Throughout the 80's and 90's David was exceedingly active on the 6 and 10 metre bands, working over 80 countries and still holds the VK2 record for a long path 6 metre contact with 9Q5EE on the 6th of April 1991, a distance of 26252.3 kilometres. A contact he was extremely proud of. He often rushed home from work to work an elusive new country.

In 1996 David and Jenny made the decision to move from Sydney to Megan near Dorrigo. He embraced the lifestyle and community, and fell in love with the rolling hills. He cherished the friendships made on the plateau. Since moving to Megan in 1996 he became very interested in the 40 meter AM band. He loved nothing more than to talk technically and offer helpful advice to his many friends throughout the world who share this love of AM.

David was always the inventor and builder. He published numerous articles and designed and built many pieces of radio equipment, mostly using valves, to which he had a particular liking. Some of his much loved items he had the opportunity to pass on to his close friends before he left us.

He will be missed particularly on the 40 Meter AM band.

His interest in all things radio extended to broadcast valve radio sets, and he joined the local Historical Radio Society of Australia.

David had a great interest in photography and videography, beginning with slides, Super 8 and Standard 8 films moving right through to the digital age which he embraced. He would often host film and slide nights for the bushwalking club in Sydney. In more recent years he produced videos for Jenny's Painting demonstrations, and for others. He became the Cameraman, Editor, Producer and Director, and with his self-taught computer editing skills produced some excellent DVDs, ever the perfectionist.

David loved to paint and had a natural flair. Painting the Dorrigo Plateau was a joy to him. Jenny is a well known artist and teacher and together they had several galleries with their own work. Then, in 2009 they opened a permanent gallery in Dorrigo which was stocked with only their own work.

In recent years David had several hospitalisations, each being life threatening but in his own determined way he kept bouncing back.

In 2012 David decided that it was time to "Walk Across England" despite his illness. After Jenny picked herself up off the floor as David never wanted to fly anywhere, she said yes. Two weeks before they were due to fly to the UK, David was back in hospital, but in his usual determined fashion, nothing was going to stop him going, not even the advice of the doctors, and in September 2012 they finally boarded the plane for the UK. The walking schedule had to be modified slightly but they still managed to see more of the UK than most UK residents do. It was a fabulous trip and Jenny's memories will last forever.

David was very pleased and proud when Jenny obtained her Foundation Licence and became active on the air as VK2FJEN. Jenny is looking forward to obtaining an Advanced licence so that she can carry on the VK2BA callsign.
In April 2014 David and Jenny's first grandchild, Ewan, was born to Leonie and her husband Neville VK2QF. David was smitten and the smile couldn't be wiped from his face.

David is survived by his wife Jenny VK2FJEN, daughter Leonie and her husband Neville VK2QF and their son Ewan, and son Andrew and partner Leeny.
David's well attended funeral was held at St David's Uniting Church in Dorrigo on the 5th of March 2015. The large number of Amateur Radio operators present formed a guard of honour as David left the church on his final journey.

The Amateur Radio fraternity extends its deepest Sympathy to David's family.

Vale: David Edwin Macnaughton VK2BA

Compiled by Henry Lundell VK2ZHE from the eulogy kindly provided by the Macnaughton family.