



OXTALES

Newsletter of the Oxley Region Amateur Radio Club Inc.
PO Box 712 Port Macquarie 2444

[<http://portmacquarie.yourguide.com.au/viewclub.asp?clubid=1044&pageid=2012>]

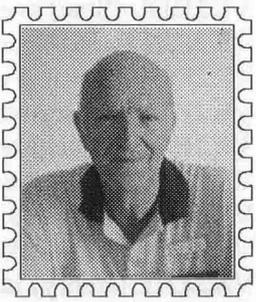
May 2004

Compiled by VK2TT

PRESIDENT: Alan Nutt VK2GD 6582.3557
VICE PRES: Bill Brooke VK2ZCW 6581.0547
TREASURER: John Bailey VK2KHB 6582.2192
SECRETARY: Henry Lundell VK2ZHE 6582.0534

President's Report

What a great flurry of activity since our March issue. We made the effort, and lo and behold, VK2RCN is on the air once more. Tests so far have indicated it appears to be as good as it previously was, even with a forced height reduction of the Rx antenna and a slightly more lossy feeder to boot. Our rigger could not get an adequate foothold on the top section of the mast so the Rx aerial was mounted at the upper climb limit using some RG-213 coax already in situ as we could not recover our heliax cable from the top level. Doubtless there are more reports of this exercise elsewhere in this issue so suffice for me to say a big thank you to the installation team. The site looks very respectable, having had a good clean-out of the shack and a suitable application of paint to some tatty areas.



The circular letter sent to local hams in the area has proved of real benefit, resulting in a number of former club members "returning to the fold" as well as some new members. A warm welcome to all the "newcomers" and "returnees" and we look forward to your contribution to the workings of the Club. Remember, we are always on the lookout for speakers at our Friday night gatherings so, if you have a special interest area, be it ham radio or not, we would like to hear from you..

Most of you will be aware that Bob Brodie, VK2EJK, has been appointed manager of the Club station, VK2BOR and it will be his responsibility to ensure that log sheets are properly kept and QSL cards distributed.

It has been agreed that we make VK2BOR our QSL manager and all those WIA members who wish to avail themselves of this facility should advise Bob so that a call list can be sent to the VK2 Division QSL manager. This arrangement should result in a quicker card turn around for all concerned.

It has also been agreed that during the Club nets, the net controller use the Club call sign when announcing the ident, and adding his/her own call sign as the operator for the occasion.

Moves are well under way to broadcast QNews on a weekly basis over VK2RCN. Members interested in being placed on a roster to run this weekly session should make contact with Chris, VK2UW, who has the necessary details.

Dave, VK2AYD has provided us with some interesting web sites carrying details of miniature receivers and transceivers intended for Fox Hunt activity. If you missed the URL addresses, check with Dave.

Alan Nutt VK2GD
El Presidenté

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Down The Coax

Friday Night Get-together
Fri. May. 14th & 28th
7.00pm

Cowarra Dam Tour
24th May
(See notice page 4)

June Monthly Meeting
Sat June 5th
2.00pm

2004 Field Day Weekend
Sat/Sun 12th/13th
Buller St Scout Hall
Port Macquarie
(See enclosed Programme)

Friday Night Get-together
Fri. June 11th & 25th
7.00pm

July Monthly Meeting
Sat. 3rd July
2.00pm

Net Controllers Roster

Sundays

VK2UW May-02
 VK2AIF May-09
 VK2BZD May-16
 VK2EJK May-23
 VK2TT May-30

Wednesdays

May

VK2HKW May-05
 VK2EI May-12
 VK2ATM May-19
 VK2ZHE May-26

June

VK2FSH Jun-06
 VK2OA Jun-13
 VK2UW Jun-20
 VK2AIF Jun 27

VK2AYD Jun-02
 VK2EI Jun-09
 VK2ZCM Jun-16
 VK2GD Jun-23
 VK2HOT Jun-30

July

VK2BZD Jul-04
 VK2EJK Jul-11
 VK2HKW Jul-18
 VK2TT Jul-25

VK2ZHE Jul-07
 VK2ATM Jul-14
 VK2UW Jul-21
 VK2AYD Jul-28

August

VK2FSH Aug-01
 VK2OA Aug-08
 VK2AIF Aug-15
 VK2HKW Aug-22
 VK2BZD Aug-29

VK2EI Aug-04
 VK2GD Aug-11
 VK2ZCM Aug-18
 VK2HOT Aug-25

September

VK2EJK Sep-05
 VK2TT Sep-12
 VK2FSH Sep-19
 VK2OA Sep-26

VK2UW Sep-01
 VK2ATM Sep-08
 VK2ZHE Sep-15
 VK2AYD Sep-22
 VK2EI Sep-29

October

VK2UW Oct-03
 VK2AIF Oct-10
 VK2HKW Oct-17
 VKBZD Oct-24
 VK2EJK Oct-31

VK2HOT Oct-06
 VK2ZHE Oct-13
 VK2GD Oct-20
 VK2ZCM Oct-27

E-mail directory.

Reflects all changes notified up to 28th April 2004

VK2EI (Neil) neilsan@tpg.com.au
 VK2GD (Alan) anut@midcoastl.com.au
 VK2OA (Allan) possoa@tsn.cc
 VK2TT (Trevor) grumps@felglow.com.au
 VK2UW (Chris) vk2uw@iprimus.com.au
 VK2ATM (Arthur) arfamo@midcoast.com.au
 VK2AYD (David) davpil@midcoast.com.au
 VK2CHC (Richard) farmsale@midcoast.com.au
 VK2CLL (Larry) lindsay@midcoast.com.au
 VK2DAL (David) vk2dal@tpg.com.au
 VK2DDL (Stan) svellis@tsn.cc
 VK2EJK (Bob) bobro24@optusnet.com.au
 VK2FSH (Charles) cpedmond@felglow.com.au
 VK2ZCM (Craig) vk2zcm@dodo.com.au
 VK2HOT (Bruce) brucew@tsn.cc
 VK2YOR (Roy) rburges@intercoast.com.au
 VK2ZCV (Bill) bilsinvk@ecopost.com.au
 VK2ZCW (Bill) cabrooke@bigpond.com
 VK2ZHE (Henry) lundell@tpg.com.au
 VK2ZIS (Graeme) admiral@midcoast.com.au
 Jim Daniel jaidanl@bigpond.com
 Barry Gilson gilson@austarnet.com.au

Record Speeds

Continuing the story about the development of the speeds of gramophone recordings commenced in March OXTALES. Here is Part II.

The 33-1/3 r/min speed came about when Western Electric synchronized motion pictures with records shortly after the introduction of electric recording in 1925. A reel of 35-mm motion picture film runs for 11 minutes. A record was needed to play the same length of time, which was 3.66 times longer than the 3-minute 10-inch 78-r/min record. It was also necessary that the sound be equal to that of the best records. The minimum needle-in-the-groove velocity was 16.33 in/s. To obtain the minimum groove velocity would require, at the end of play of the record under design, a minimum music groove diameter approximately twice that of the 78-r/min record if its speed was to be approximately one-half of 79 r/min. If the speed was to be a little less than one-half, the minimum diameter would have to be larger. Ten inches would seem to have been indicated since the 78 minimum music groove diameter was more than 4

inches. With this determination made, the speed of the record was next in order. Since some difficulty was previously experienced in locking 78 r/min to the line, the motion picture projector people were consulted. What would be a convenient speed approximately one-half of 78 that could be easily locked to the 60-hertz line? The answer was 33-1/3. A simple worm drive with a one-tooth worm and a 54-tooth driven gear or a spur-gear train with 18-tooth pinions, a 108-tooth intermediate, and a 162-tooth final turntable drive gear did the job perfectly.

With this information in hand, it was determined that 11 minutes of playing time would require 33-1/3 grooves for each minute or 366.6 grooves. At 75 grooves per inch, a music groove band or area on the record of 4.884 inches wide was required, or an increase of 9.77 inches in diameter over the minimum music groove diameter, for a total diameter of 19.77 inches. This meant that a 20-inch diameter record was required.

Increasing the groove pitch over the very conservative figure of 75 per inch used in the trial calculation gave the additional record area needed for limiting the maximum music groove diameter of 19-1/2 inches on the 20-inch record to provide a guard band at the circumference. This, in essence, is the story of the origin of the 33-1/3 r/min record speed.

For the 33-1/3 12-inch LP, only the arithmetic is different. For a 23-minute record, 766 grooves are needed. At a pitch of 300 per inch, this is a music groove band of 2.553 inches wide for the maximum music groove diameter of 11-1/2 inches on a 12-inch record with a 1/4-inch guard band. This leaves a minimum music groove diameter of 6.394 inches; more than needed but found useful for progress. On the basis of such a calculation, the decision was to stay with the 33-1/3 r/min speed. The average wavelength for the top frequency reproduced was 0.0055 inches for the 78 r/min compared to 0.0012 for the 33-1/3. The improvement in compound had more than offset this difference.

The story of the 45-r/min single can be told more briefly. The commercial policy decision was to have a 7-inch high quality fine groove 5-1/2-minute single record plus other features not relevant here. In this instance, all of the design variables except the speed had been established. The

arithmetic said 45 r/min. No other figure would fit. The selection of this speed was a well-considered determination in every instance and not the product of caprice. However, there is another -- shorter -- version of how it was chosen: 78 minus 33 equals 45.

Did the war of the speeds cause record sales to dive from 1948 to 1950? It is true that during 1948 and 1949 and for a while thereafter, when Columbia and RCA introduced fine groove records, sales in the United States did turn downward from a continuous upward curve. Then, when RCA in 1950 began releasing records on both speeds, and when Columbia did the same in 1951, record sales soared again. The other and more important half of the story is that during the introduction of the new speeds, the U.S. was experiencing a post-World War II depression with increasing unemployment, frequent layoffs, federal government expenditures reduced by 60%, and per capita income decreased by 7%. The downwind turn of record sales coincided with these conditions. In 1950 almost simultaneously with both companies releasing records on both speeds, a conflict started in Korea. Expendable income became more plentiful and record sales responded accordingly. After factoring out the effect of the national economy, the battle of the speeds could not have been heard even around the block. For better or worse, the record industry is not a world unto itself. . . ."

John Moyle Field Day Contest Effort

The ORARC's effort in the 2004 Field Day Contest was well supported by the membership. The crew, comprising the usual regular participants, supported by a good representation of other members lending a willing hand, assembled at the club's rooms at 10.00am on Saturday 20th March to load the equipment and transport it to the site.

Set-up work at the Tacking Point Lighthouse site began around 10.45am, and all was operational by Noon.

The participants throughout the operational period of 5 hours, were:
VK2ATM, ZCV, TT, AYQ, ZCW, BZD,
KDL + XYL Gwen, EI, GD, KHB, EJK,

ZHE, YOR, AYD and AIF.

The weather on the day was delightful, and adding to the enjoyment of the event was a "swim-past" by three itinerant whales, travelling northwards. They passed within 50-100 metres of the rocks below Tacking Point for all to see.

Collectively, two dozen hot dogs, expertly prepared by Henry (ZHE) were consumed !

We have to particularly thank Neil, VK2EI, for supplying the 2 metre equipment. There was a surprising amount of 2 metre SSB activity and the contacts attracted very worthwhile multipliers.

— Henry VK2ZHE

The Final Score

Bob (VK2EJK) reports the results were as follows:

Contacts	Band	Points
12	20 M	24
73	40 M	146
1	2 M FM	2 (thanks Dave)
17	2 M SSB	366
103		538

Looking at last year's results we could finish in second place ! but do not put any money on it.

— Bob (VK2EJK)

(Below) Some of the construction workers setting up the John Moyle operations tent in delightful Autumn weather. From left to right, we see Arthur (VK2ATM) in full "supervisory Mode"; Bill VK2ZCW giving voice to words of encouragement; John (VK2KHB) judiciously applying tension to a guy-rope; David (VK2AIF) executing final tension tests on a guy-rope to ensure that it is tuned to A-3 below Middle C; Jim (VK2BZD) threading the anti-breeze-flapping rope through the tent flap eyelets, while Bob (VK2EJK) - we think? - sorts the guy-ropes from a tangle. A classical team effort in tent erection, graphically frozen in time over 6.666m/Secs, with the aid of digital photography!



WANTED

to buy, beg, borrow, or steal: Some Multi-strand copper Earth wire of the older un-insulated 7/029 type. Enough for a G5RV. VK2AIF's local galahs like the insulated variety for use as a trapeze and have been causing him grief. Contact DAVID (VK2AIF) Phone as per membership list.

BPL – PLC – PLT

What is it?

BPL – Broadband over Power Lines

PLC – Power Line Communications

PLT – Power Line Transmissions

They are all the same! You have probably read the tremendous hype and concern around the world where Power Companies have been seeking ways of using their power lines for digital communications. It may sound easy and some of you will say it has been used to switch on street lighting and telemetry. This is not the same. That was done at low frequencies and single tone or very small byte packages.

Information from the internet can reach your home via telephone lines, satellites, cable and simple wireless systems. Most of these are narrow band (a small stream) at slow speeds up to 100KB p/s, or with the new "Broadband" where it pours out like a gushing torrent in Megabits. There are restrictions with "Broadband" currently in use as you have to live within a radius of no more than 3 or 4 km from the telephone exchange. Special cable connections are necessary.

For years Power Companies have been seeking an alternative, but because of the bandwidth needed, the carrier has to be at HF frequencies. You can imagine the radiation that occurs. From tests in the USA, it was found the entire HF spectrum was jammed with interference. It isn't just the Amateur fraternity that is concerned. Other services, emergency, aircraft, etc., are concerned. Just recently tests were carried out in Tasmania but at the time of writing the outcome has not been made public.

There are lots of hurdles with using power lines. Distance is one with the deterioration of the signal. Transformers, etc., all add to the problems.

From what I have read recently, it does not look viable as the investment needed is enormous and financial backers are looking for more realistic ideas for R.O.I.

What you may see in the future is WiFi, which will be around 2.4, 3 or 13 GHz. This involves some satellite and phone masts – but more on that another time.

— de VK2AYD

Cowarra Dam Tour

The Oxley Region Amateur Radio Club has made an exclusive booking for the dam Tour on Tuesday 25 May 2004. The tour starts at 08:30 am from the Pioneer Room in the Senior Citizens' Hall in Munster Street, Port Macquarie.

The tour can accommodate a maximum of 21 people as this is the capacity of the minibus used to provide the return transport to the dam site. The tour concludes back at the Senior Citizens' Hall just after mid-day at approximately 12:30 pm. It is not possible to take your own car to the dam. Please park your car in the grassed off-street parking area at the end of Munster Street. This will leave the limited parking at the Senior Citizens' Hall car-park free for others who will be using hall while we are away at the dam site. The tour is run by the Hastings Council Waterwise office. Tour Leader is Bill Hunter. There is no charge to go on the tour.

The tour commences with an audio visual presentation at the Senior Citizens' Hall. We will then be transported to the Cowarra Dam site to inspect the various facilities including the saddle dam, spillway, pumping station and picnic area. The bus trip will take approximately 20 minutes each way. There is minimal walking required, but it is suggested that comfortable sturdy shoes should be worn. Refreshments will be served at both the Senior Citizens' Hall, and at the dam site. Bring your camera!

Cowarra Dam is located approximately 5 kilometres south east of Wauchope. The 10,000 million litre off-creek storage dam is part of the Hastings water supply augmentation scheme. The dam tour is very popular. Those who have already been on a tour have found the experience both informative and enjoyable.

If you would like to attend, please advise club secretary Henry Lundell VK2ZHE as soon as possible on air, or by telephone on (02) 6582 0534. Henry is keeping a list to ensure that there will be a seat on the bus for every one who attends. Club members are invited to bring their partners.

VK2RCN Voice Repeater Speaks Again!

Recently, a team of ORARC members made a concerted assault on the VK2RCN site at Telegraph Point to restore the voice repeater to full operation. The VK2RCN 2M FM repeater has been silent for more than two years following a major hardware failure and some subsequent uncertainty as to the continued availability of the site.

Thanks to some intervening hard work on the hardware by VK2ZCV, VK2ATM, & VK2EI, which involved not only the electronics of the transmitter, but also some cavity modifications and adjustments, the gear was restored to normal operation. A timer bypass circuit has been added to the control circuits so that extended broadcasts may be made. Three "muffin" fans have been added to the heat-sink of the transmitter. After a period of confidence tests from the QTH of VK2ZCV, the whole caboodle was transported to its normal home at Telegraph Point on Wednesday 14th April.

The services of a professional rigger were obtained to do the climbing of the mast to restore an "almost normal" configuration of the refurbished antennae system, and around 1.00pm on the above date, VK2RCN cleared its throat, and broke its extended silence.

The team comprised VK2ZCV, VK2ATM, VK2ZHE, VK2ZCW, VK2GD, VK2EJK, & VK2TT. In addition to restoring full operation of the VK2RCN facility (which now sports a previously lacking back-up battery supply), the hut was given a thorough clinical clean-up, the cabinet that houses the gear was given some cosmetic treatment with some paint, and the area around the site was treated to some "whipper-snipping" to remove the well nourished grass that had invaded the site because of recent rain.

Bill, (VK2ZCV) conducted some measurements and calculations on isolation and de-sensing. These reveal that there is about 80DB isolation as the RX cable is RG213 NOT the LDF450 & the RX antennae is about 7mtrs. lower than its original height.

The snapshot (below) shows VK2ZCV and VK2ZHE making some judicious adjustments and measurements to obtain the optimum spacing between the antenna vertical element and the mast. At right (opposite), we see our rigger, Mark Moore, removing the unused Rhema yagis



from the mast.

VK2RCN was able to celebrate its restoration by carrying the weekly Wednesday 2-metre net at 7.00pm on the evening of its restoration.

Then came a glitch! Bill (VK2ZCV) takes up the story:

"On the afternoon of Friday 23rd April, VK2RCN apparently stopped working as those who tried could get no response. However for unknown reasons it was again working at 9-30pm. and has continued to operate as normal since!

A visit to the site was made on Saturday morning by VK2's ZCW,ZCV,ZCM and Adam to investigate. Nothing wrong could be found but some testing revealed the following:-

*TX o/p at the RX terminal on RX freq:
NOT DISCERNABLE.*

*TX o/p at the RX terminal on TX freq:
-95DBM.*

*The RX mute with or without the TX operating at the RX terminal in parallel with the RX Ant connected:
0.45 μ V and remains open to 0.32 μ V.
NB. This is a VERY NOISY signal.*

"Roundup" was applied to an area at the base of the tower and the building. The door was treated to three coats of light coloured paint.

All reports of misbehaving of this device would be appreciated, as would be reports of coverage.

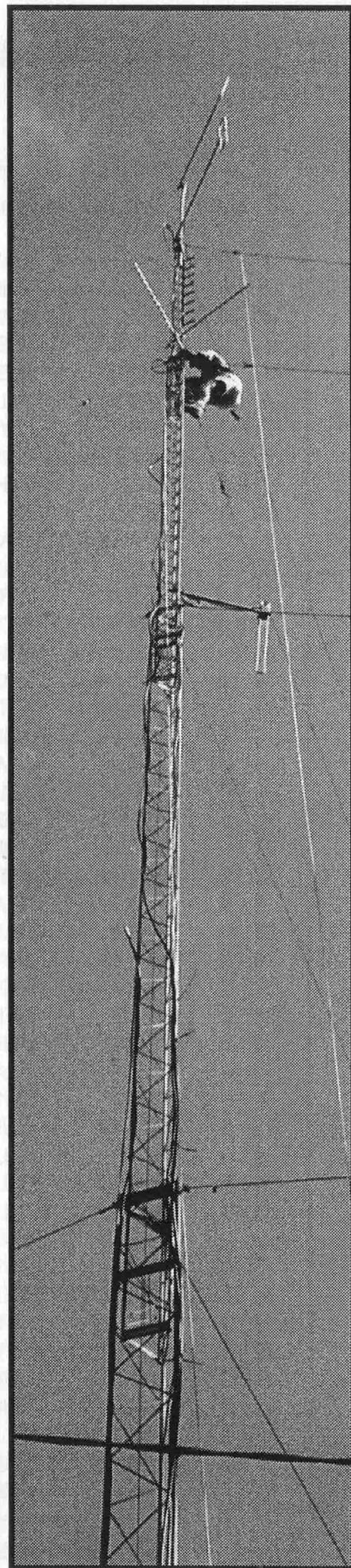
Bill VK2ZCV.

Friday Night Talks

The Friday Night talks delivered recently by Jim (VK2BZD) and Alan (VK2GD), were most informative and interesting events. Unfortunately, nobody brought along a camera to capture the images of Jim's emergency communications devices. They would have formed the basis for an interesting OXTALES article. Steps will be taken to see if Jim will make his creations available for photographing for a future item.

Volunteer speakers are invited to come forward for more of these interesting evening talks to share their experiences and/or ideas .

**ORARC's Queen's Birthday
Field Day Weekend
Saturday, June 12th
and
Sunday, June 13th
(See programme insert)**



OXLEY REGION AMATEUR RADIO CLUB Inc.

MEMBERSHIP REGISTER.

(as at 27th May, 2004)

Cat.	Surname	Given name	(Spouse)	CALL SIGN	TOWN/CITY	TPH. NO.
1	O	BAILEY	JOHN (FLORENCE)	VK2KHB	PORT MACQUARIE	02 6582.2192
2	O	BAYLIS	JOHN	VK2JB	LAKE CATHIE	
3	D	BELL	ALAN	VK2BEL	COOLONGLOOK	02 6554.1689
4	L	BLYTH	BOB	VK2XIQ	PORT MACQUARIE	-
5	O	BRODIE	BOB	VK2EJK	PORT MACQUARIE	02 6582.0592
6	O	BROOKE	BILL (AILSA)	VK2ZCW	PORT MACQUARIE	02 6581.0547
7	O	BURGES	ROY W (JUNE)	VK2YOR	PORT MACQUARIE	02 6583.9349
8	O	COULTER	KEVIN (JUNE)	VK2MAM	PORT MACQUARIE	02 6583.8325
9	O	COURT	RICHARD LINDA	VK2CHC	BEECHWOOD	02 6585.6866
10	A	DANIEL	JIM	-	PORT MACQUARIE	02 6583.1933
11	O	EDMONDSON	CHARLES (PAT)	VK2FSH	PORT MACQUARIE	02 6584.0495
12	D	ELLIS	STAN (BETTY)	VK2DDL	TUNCURRY	02 6554.7996
13	A	GILSON	BARRY	-	PORT MACQUARIE	02 6583.8814
14	O	GLEESON	BADEN	VK2MOQ	PORT MACQUARIE	
15	O	GREEN	LEWIS (PAMELA)	VK2AG	PORT MACQUARIE	02 6584.9162
16	O	GREENWOOD	GRAEME	VK2ZIS	PORT MACQUARIE	02 6559.4836
17	L	HANLON	KEITH	-	PORT MACQUARIE	-
18	O	HANSEN	JOHN	VK2AYQ	PORT MACQUARIE	02 6582.7932
19	O	HARDING	DAVID (ISABELLA)	VK2AIF	WAUCHOPE	02 6586.4980
20	O	JAMIESON	WILL (CAROL)	VK2XXU	DUNBOGAN	02 6559.8622
21	L	LINDSAY	LARRY	VK2CLL	WAUCHOPE	02 6587.1155
22	L	LUNDELL	HENRY	VK2ZHE	PORT MACQUARIE	02 6582.0534
23	O	LUTTON	KEITH (GWEN)	VK2KDL	TELEGRAPH POINT	02 6585.0321
24	O	MADIGAN	ALLAN (DAWN)	VK2OA	WAUCHOPE	02 6585.2043
25	O	MARTIN	CRAIG	VK2ZCM	SANCROX	02 6585.3452
26	O	MCLEAN	JOHN	VK2KCE	PORT MACQUARIE	
27	O	MEEHAN	TERRY	VK2KL	PORT MACQUARIE	02 6584.2997
28	L	MONCK	ARTHUR (WENDY)	VK2ATM	PORT MACQUARIE	02 6583.1311
29	O	NEWHAM	LAURIE (ROBIN)	VK2ELN	PORT MACQUARIE	02 6583.5387
30	O	NUTT	ALLAN	VK2GD	PORT MACQUARIE	02 6582.3557
31	O	PILLEY	DAVID A (DEE)	VK2AYD	KING CREEK	02 6585.2647
32	O	ROMAINE	PAUL (BARBARA)	VK2UPR	PORT MACQUARIE	
33	O	ROTH	BILL	VK2CWR	PORT MACQUARIE	
34	O	SANDFORD	NEIL (VERENA)	VK2EI	PORT MACQUARIE	02 6582.5830
35	O	SINCLAIR	BILL	VK2ZCV	PORT MACQUARIE	02 6583.9302
36	D	SLOMAN	ERNEST	VK2BUE	TENTERFIELD	02 6736.1388
37	O	SMITH	DAVID (ROMA)	VK2DAL	WAUCHOPE	02 6585.1004
38	A	SYMINGTON	NOEL	-	PORT MACQUARIE	02 6584.9811
39	O	TARRANT	DAVID (AILEEN)	VK2TBC	SARATOGA	02 4369.8738
40	O	THATCHER	TREVOR (PHYLLIS)	VK2TT	WAUCHOPE	02 6585.2278
41	O	WALKE	GARY	VK2UHF	PORT MACQUARIE	02 6584.4714
42	O	WALKER	BRUCE (GWEN)	VK2HOT	PORT MACQUARIE	02 6583.8360
43	O	WEBSTER	JIM	VK2BZD	PORT MACQUARIE	02 6582.4037
44	O	WRIGHT	CHRIS (KAREN)	VK2UW	PORT MACQUARIE	02 6582 6757
45	O	WRIGHT	KAREN (CHRIS)	VK2HKW	PORT MACQUARIE	02 65826757

A = Associate Member O = Ordinary Member D = Distant Member L = Life Member