

#### First published 1980

Newsletter of the Oxley Region Amateur Radio Club Inc.

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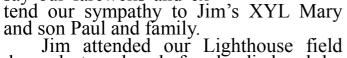
## September 2007

Compiled by VK2TT & VK2AYQ

PRESIDENT: Alan Nutt 6582.3557 VK2GD VICE PRES: Henry Lundell VK2ZHE 6583.8360 TREASURER: John McLean VK2KCE 6584 6220 SECRETARY: Jim Neil VK2VIV 6581.2481

## President's Report

Long-time active member of our Club, Jim VK2BZD, Webster, passed away suddenly on Monday, 20th August. A good number of our members attended his funeral the following Friday to say our farewells and ex-



day only two days before he died and departing this life was probably the last thing on his mind. How suddenly life can be terminated – here one moment, gone the next and all we are left with are memories. He'll be greatly missed.

On more mundane matters, reports to hand indicate our SES friends have finally got things under way for the construction of their new premises. This means we now need to be serious about finding alternative accommodation. Contact with our local Council last week has not proved all that helpful except to confirm that Council does propose to sell the present site. They have little to offer in the way of an alternative meeting place but have given us a number of suggested contacts which we will follow up. The possibility of sharing space with the SES is still not closed off but Council reminded us that any sub-leasing arrangement would need to be included in the SES lease agreement with Council. All suggestions are welcome at this stage.

I have been reminded again recently of the rapidly increasing trend to our becoming a throw-away society. This was brought about as I began the task of clearing out the workshop in preparation to selling our house. I found I had no fewer than five defunct DVD players lying around, all of el-cheapo Chinese manufacture (not all mine, I might add.). Each had suffered a power supply failure and none had originally cost more than \$70. Later, trying to find some replacement IC's on the Web, I came across a DVD usergroup where someone had commented that none of these cheap devices appears to last more than four to six months. I can verify that observation but it's taking built-in obsolescence a bit too far for my liking. I can't see any smart answer to this one but it certainly plays havoc with our electronic service industry...

#### - Alan Nutt VK2GD El Presidentè

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| Down The Coax<br>Friday Night Get-togethers<br>September 14th & 28th 7.00pm   |   | oice Repeat<br>lays                            | crollers' Ros<br>ter VK2RPM 1<br>Wedi<br>(1930            |  |
|---|---|--|---|--|
| October Monthly Meeting Sat. 6th October at 2.00pm  | VK2VIV<br>VK2TT<br>VK2OA  | Septo<br>Sep-02<br>Sep-09<br>Sep-16            | ember 2007<br>VK2EI<br>VK2AYD<br>VK2GD                    | Sep-05<br>Sep-12<br>Sep-19                     |
| Jota<br>Sat/Sun October 20th & 21st   | VK2VIV<br>VK2TT   | Sep-23<br>Sep-30                               | VK2ZCM  | Sep-26   |
| Beechwood Billy Cart Classic<br>Sunday 21st October   | VK2OA<br>VK2VIV<br>VK2TT<br>VK2AO   | Oct-07<br>Oct-14<br>Oct-21<br>Oct-28           | ober 2007<br>VK2ATM<br>VK2ZHE<br>VK2EI<br>VK2AYD          | Oct-03<br>Oct-10<br>Oct-17<br>Oct-24<br>Oct-31 |
| Friday Night Get-togethers October 12th & 26th 7.00pm November Monthly Meeting  | VK2VIV<br>VK2TT<br>VK2OA  | Nov-04<br>Nov-11<br>Nov-18                     | ember 2007<br>VK2GD<br>VK2ZCM<br>VK2ATM                   | Nov-07<br>Nov-14<br>Nov-21                     |
| Sat. 3rd November at 2.00pm   | VK2VIV  | Nov-25   | VK2ZHE  | Nov-28   |
| E-mail directory.  Reflects ALL changes notified up to 26th October, 2007  VK2EI (Neil) neilsan@tpg.com.au  VK2EM (Bruce) brucee@iprimus.com.au  VK2GD (Alan) anu16734@bigpond.net.au   | VK2TT<br>VK2OA<br>VK2VIV<br>VK2TT<br>VK2OA  | Dec-02<br>Dec-09<br>Dec-16<br>Dec-23<br>Dec-30 | ember 2007<br>VK2EI<br>VK2AYD<br>VK2GD<br>VK2ZCM          | Dec-05<br>Dec-12<br>Dec-19<br>Dec-26           |
| VK211 (Trevor) grumps@midcoast.com.au<br>VK2YB (Roy) identity@midcoast.com.au<br>VK2ATM (Arthur) arfamo@midcoast.com.au<br>VK2AYD (David) dvdplly@midcoast.com.au<br>VK2AYQ (John) hansenjo@ozemail.com.au<br>VK2BAL (Les) lnbjanes@tpg.com.au  | VK2VIV<br>VK2TT<br>VK2OA<br>VK2VIV  | Jan-06<br>Jan-13<br>Jan-20<br>Jan-27           | uary 2008<br>VK2ATM<br>VK2ZHE<br>VK2EI<br>VK2AYD<br>VK2GD | Jan-02<br>Jan-09<br>Jan-16<br>Jan-23<br>Jan-30 |
| VK2BEL (Allan) belly@tsn.cc VK2BOR (ORARC) vk2bor@westnet.com.au VK2CJM (Chris) Chris@CalmDowns.org.au VK2CHC (Richard) farmsale@midcoast.com.au VK2CLL (Larry) lindsay@midcoast.com.au VK2DDL (Stan) svellis@tsn.cc VK2EJK (Bob) rbr01962@bigpond.net.au   | VK2TT<br>VK2OA<br>VK2VIV<br>VK2TT   | Feb-03<br>Feb-10<br>Feb-17<br>Feb-24           | ruary 2008<br>VK2ZCM<br>VK2ATM<br>VK2ZHE<br>VK2ZEI        | Feb-06<br>Feb-13<br>Feb-20<br>Feb-27           |
| VK2FSH (Charles) cpedmond@felglow.com.au VK2HOT (Bruce) vk2hot@tsn.cc VK2IEV (Joe) bivona@aapt.net.au VK2KCE (John) hrbe@bigpond.net.au VK2DMX (Steve) haddie_007@hotmail.com VK2TMG (Brett) breree@gmail.com VK2TRM (Graham) emu@midcoast.com.au VK2VIV (Jim) jim.neil@gmail.com VK2YOR (Roy) rburges@intercoast.com.au VK2ZCM (Craig) vk2zcm@dodo.com.au VK2ZCW (Bill) wsi54224@bigpond.net.au VK2ZCW (Bill) cabrooke@westnet.com.au VK2ZHE (Henry) lundell@tpg.com.au VK2ZTM (Tim) c/- info@tvg.com.au VK2FABJ (Ailsa) cabrooke@westnet.com.au VK2FBRG (Barry) fgilson@bigpond.net.au VK2FJKD (Jim) jaidanl@bigpond.com VK9FLHI (Des) lhibluelag@bigpond.com | For Sale  Waapt.net.au  Waapt.net.au  Wabigpond.net.au  die 007@hotmail.com  waapt.net.au  WAESU FT-690R MK2  VHF All mode (FM-USB/LSB  6 Metre 50-54 MHz  2.5W O/P  Portable or Base Station  Very good condition  Very good condition  Complete with:-  Portable antenna (Telescopic V  Mike (Hand)  Handbook |  | SB-CW) on c Whip)   |  |

#### **Audio Interface**

An audio interface between Computer and Transceiver is necessary for all digital communication modes. Practical experience has shown that in almost all cases the two devices need to be electrically isolated from each other to avoid distortion and hum loops from com-

mon ground paths.

There are several ways to do this, but two of the most common are using audio isolation transformers or opto coupler devices. The Tx/Rx switching can be done using the audio tones to activate the vox circuits in the Transceiver or using the PTT line to hard switch the transceiver. If using the PTT circuit, this also must be isolated to avoid common earth prob-

If using audio transformers, care must be taken to use high quality ones with linear transfer characteristics. Use of a level adjustment network on the input is advisable to avoid saturation of the core with subsequent distortion of the audio waveform.

If using opto couplers, a small biasing current is needed to turn on the led and photo transistor combination to ensure class "A" linear transfer.

If using the PTT line then a transistor switched relay will provide isolation.

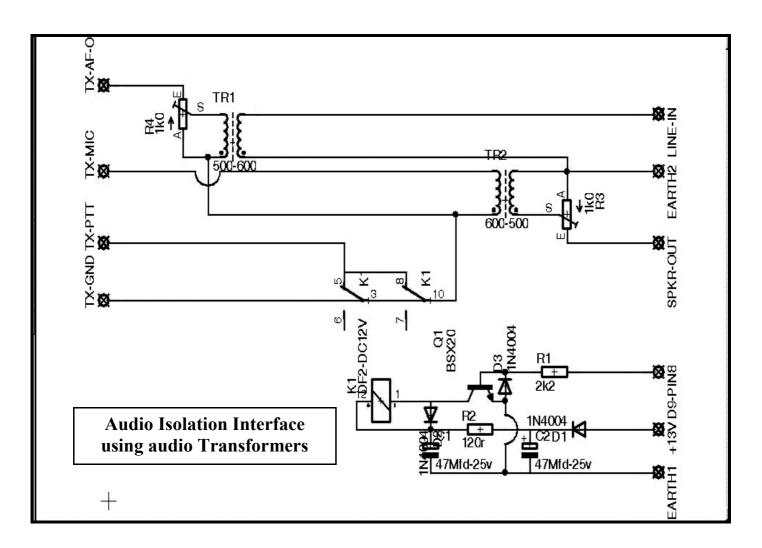
Power for the circuits must be provided separately by the computer and transceiver or by a

separate isolated power supply.

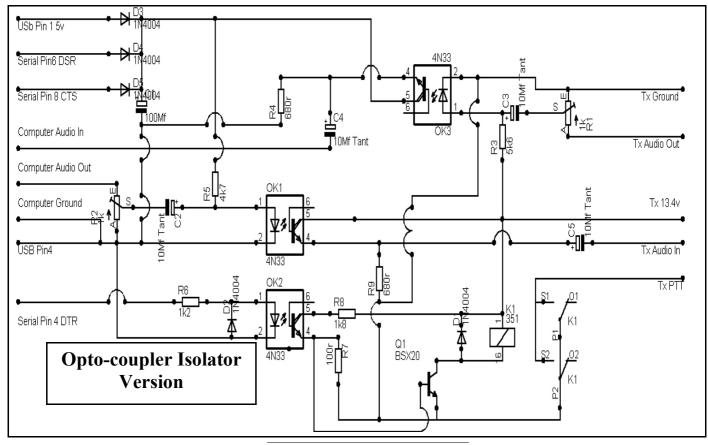
Audio output from soundcard to transceiver should, if possible be taken from the headphone socket, rather than the speaker out socket to achieve a better impedance match. The audio in from transceiver to soundcard should use the Line in socket rather than the Mic in socket.

The circuits shown are for both systems and are ones I have built and used successfully for PSK31, SSTV, RTTY, MCW, and all other digital modes.

#### - de VK2ATM



See next page for Opto-coupler version



## There IS an Explanation!

The "FFFF" item in July OXTALES, on page 3, does have an explanation. The phenomenon occurs when a light fitting has the mains active and neutral supply wired direct to the fitting and the wiring to the switch is run as two paired wires (unswitched active and switched active) between the light fitting and the switch ie, the active is looped at the switch.

Most modern compact fluorescent lamps (CFL) employ a switched mode DC-AC inverter type ballast. Consequently the input to the lamp consists of a diode bridge which rectifies the incoming mains to feed the inverter with DC.

Naturally there is a filter capacitor across the output of the rectifier to smooth the DC which runs the inverter. When the switch is turned off the capacitance between the two wires to the switch is sufficient to support enough 50 Hz AC current to slowly charge the filter capacitor. When the voltage across the capacitor is sufficient to start the inverter oscillator, the inverter starts up and there is brief flash of light from the CFL tube as the switched mode inverter starts and quickly discharges the filter capacitor.

As the current charging the capacitor is very low, the resultant flash of light is brief and not very intense, and it takes a significant time for the capacitor to build up enough voltage to repeat the cycle. For this reason the effect is only noticeable in a darkened

room. The earlier CFLs which used a passive iron cored ballast would of course not flash but would simply glow very dimly. This steady dim glow sometimes occurs in conventional ballasted fluorescent tubes under the same circumstances.

- Henry (VK2ZHE)

#### **Club Member's New Harmonic!**

Brett Rees (VK2TMG) and XYL, Yvette, have been blessed with the arrival of Delia May, a fine 4.83 Kg baby girl, on 13th August.

It has been quite some time since a club member has enjoyed the happy arrival event of a new family member. ALARA can look forward to a prospective new member a little further down the track!

Congratulations Brett and Yvette! and Welcome Delia!



Cute eh?



Silent Key James Barber Webster VK2BZD (Jim)

It is with deep regret that we record the sudden passing of James Barber Webster, VK2BZD, at Port Macquarie on Monday 20th August 2007. He was known as Jim to his many friends. Jim was in his 85th year.

Jim was born in Merewether, the son of George Ernest Barber Webster. George was

an engineer in the Army.

During his formative years Jim's family moved from Waratah, where George had built a house, to Duntroon, then to Victoria Barracks at Paddington. This was followed by two years in Brisbane before the family moved back to Sydney where George built another house in Kingsford in 1939.

While his parents were in Brisbane, Jim stayed with his aunt in Newcastle to complete his last two years of school at Newcastle

Boys High, where he was a prefect.

Jim majored in physics at university in Sydney where he completed a Science degree in 1941. He was a member of the University Regiment where he helped as he could with the war effort but could not enlist on graduation because he was automatically drafted into munitions and worked on optics. It was while he was doing this work through the university that Jim met Mary whom he married in 1948.

After the war Jim became a teacher. Following country postings to Grenfell and Gilgandra, he returned to Sydney as Science Master at Homebush and Birrong High Schools.

In retirement Jim and his wife, Mary, settled in Port Macquarie where their son, Paul VK2BZC, and daughter-in-law had earlier

moved to practice medicine.

Jim had a deep interest in all things scientific. He was very practical and had craftsman skills in both metal and wood. He particularly enjoyed metal turning on his lathe.

Amateur Radio played a very important part in Jim's life. In Sydney he was very active in the Youth Radio Scheme and ran the radio club at Birrong High School. He supported the St George Amateur Radio Society as well as the WIA. He was an active WICEN member and participated in emergency communications for disasters such as the Royal National Park bushfires and the Newcastle earthquake. He could always be counted on to participate in WICEN training exercises such as

the City to Surf and the Hawkesbury Canoe Classic. Jim's preparedness and professional approach to communications always

set a high standard.

When he came to Port Macquarie, Jim enthusiastically participated in the activities of the Oxley Region Amateur Radio Club. He rarely missed a meeting and was always first to volunteer to assist with tasks. He participated in the operation of the club station VK2BOR at the Tacking Point Lighthouse only two days before passing away.

Jim will always be remembered for his willingness to help others. He was always respected for his reliability and his unassuming manner of so freely sharing his vast

knowledge.

Jim's funeral service was held on Friday 24<sup>th</sup> August 2007 in the chapel of the Port Macquarie Crematorium. His son Paul VK2BZC delivered a heartfelt eulogy.

This Silent Key has been compiled from the eulogy which Paul so kindly pro-

vided. Thank you Paul.

Deepest sympathy is extended to Jim's wife Mary, and to all his family in their sad loss.

Vale James Barber Webster VK2BZD (Jim)

—Henry Lundell — VK2ZHE

ORARC's AGM for the year 2007-2008, held on Saturday August 4<sup>th</sup>, saw a good attendance by the membership at our Gordon Street Club Rooms.

There were very few changes to the structure of the office bearers, with Henry – VK2ZHE– taking on the Vice Presidency to replace Bruce - VK2HOT- who wished to stand down from that post, a couple of swaps within the other positions, and a new committee member, Craig—VK2ZCM. Election results, listed below, show the new office

| President Vice President Secretary Treasurer Committee Member 1 Committee Member 2 Committee Member 3 Public Officer Auditor Repeater Chairman Oxtales Editors | Alan Nutt. Henry Lundell Jim Neil John McLean Bill Sinclair Bill Brooke Craig Martin Roy Burges V. Hume Bill Brooke Trevor Thatcher John Hanson | VK2GD<br>VK2ZHE<br>VK2VIV<br>VK2KCE<br>VK2ZCV<br>VK2ZCW<br>VK2ZCM<br>VK2YOR<br>VK2TT<br>VK2AYQ |
|--|---|--|
| VK2BOR Station Manager   | Bruce Walker  | VK2HOT   |
| Welfare Officer  | Bill Sinclair   | VK2ZCV   |
| Publicity Officer  | Bill Brooke.  | VK2ZCW   |
| <b>Education Officer</b>   | Larry Lindasy   | VK2CLL   |
| Equipment Officer  | Barry Gilson  | VK2FBRG  |
| Club Historian   | John Bailey   | VK2KHB   |
| Social Director  | Barry Gilson  | VK2FBRG  |
| WIA Liaison Delegate   | David Pilley  | VK2AYD   |

And now we have set sail into 2007-2008, at full speed ahead.

#### **International Lighthouse** and Lightship Weekend (Sat/Sun 18 & 19 August 2007)

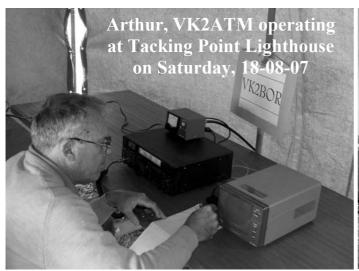
VK2BOR operated portable on Saturday 18 August 2007, from the reserve at the Tacking Point Lighthouse AUS 158, Port Macquarie

#### The participants were:

| Arthur Monck   | VK2ATM  |
|----------------|---------|
| Steve Hadfield | VK2DMX  |
|                | ,       |
| Barry Gilson   | VK2FBRG |
| John Hansen    | VK2AYQ  |
| Larry Lindsay  | VK2CLL  |
| Craig Martin   | VK2ZCM  |
| Adam Martin    | _       |
| John McLean    | VK2KCE  |
| Des Thompson   | VK9FLHI |
| Paul Jones     | VK2DEL  |
| Bob Brodie     | VK2EJK  |
| Jim Webster    | VK2BZD  |
| Bill Brooke    | VK2ZCW  |
| Bill Sinclair  | VK2ZCV  |
|                |         |
| Alan Nutt      | VK2GD   |
| Henry Lundell  | VK2ZHE  |

Throughout the group's period of operation, from 0019 UTC—0415 UTC on the 18th, they collected a good haul of contacts, which included: VK2ATZ Nora Head (AUS 119), VK4WIN Pine Islet, VK3TEX Kyabram, VK3EG Point Hicks (AUS133), VK4BAR Cleveland Point (AUS 130), VK4BOI Noosa, VK2BEL, Sugarloaf Point, Seal Rocks, VK4BW Burnetts Head old lighthouse, VK4WIS Old Caloundra, VK2EBR Cundletown, VK2H H. Smokey, Canal Cundletown, VK2ILH Smokey Cape, VK3WI Williamstown, VK3ANR Geelong, VK5BWR Lowly Points, Whyalla, VK2FREK Warden Head, VK3GER Eastern Lighthouse McCrae, VK3ILH Currie Lighthouse King Island, VK5VGC Kapunda, VK2KLB Pambula, VK2BJ/M Berry. All the foregoing stations were worked on the 40M band. On the 20M band contacts were made with ZL6LH band, contacts were made with ZL6LH Manukau Heads, and VK4VAP Kelso. Thank you to everyone. The many willing hands made quick work of setting up and dismantling the station. The operation was a great success with a fine day and good band conditions. Special thanks to Steve, VK2DMX, for bringing his trailer. It made transporting all the equipment very easy this year. - Henry—VK2ZHE

See pictures on the next page for this event and the RD contest, submitted by Bill— VK2ZCW.





Remembrance Day Contest

Club members were also active on the occasion of Remembrance Day. Over the weekend of 11/12th August, operating from VK2ZHE's comfortable shed location, at Port Macquarie, fifteen members participated in taking turns at the operating position. Those

members taking part were:

| VK2EI   |
|---------|
| VK2ZCV  |
| VK2FBRG |
| VK2DMX  |
| VK2KHB  |
| VK2HOT  |
| VK2VIV  |
|         |

|                              | O 1     |
|------------------------------|---------|
| Bill Brooke                  | VK2ZCW  |
| John Hansen                  | VK2AYQ  |
| Paul Graham                  | VK2FPRG |
| Alan Nutt                    | VK2GD   |
| John McLean                  | VK2KCE  |
| Des Thompson<br>Craig Martin | VK9FLHI |
| Craig Martin                 | VK2ZCM  |
| Henry Lundell                | VK2ZHE  |
| -                            |         |

At the time of going to press, our score was not available, but details will appear in our

(Left) Barry—VK2FBRG & Joe—VK2IEV At the operating table in Henry's Shack



## (Right)

A change of role for Barry and Joe when they became caterers, after their operating stint. Neil—VK2EI, in the background, is responsible for total quality control.





# OXLEY REGION AMATEUR RADIO CLUB Inc. MEMBERSHIP REGISTER.

(As at 29th August 2007)

| Ca   | t. Surname       | Given          | Spouse Name | Call    | Location         | Tph          |
|------|------------------|----------------|-------------|---------|------------------|--------------|
| 1 O  | BAILEY           | JOHN           | (FLORENCE)  | VK2KHB  | PORT MACQUARIE   | 02 6582.2192 |
| 2 D  | BELL             | ALAN           |             | VK2BEL  | COOLONGOLOOK     | 02 6554.1689 |
| 3 O  | BIVONA           | JOE            | (ROSE)      | VK2IEV  | PORT MACQUARIE   | 0405 040 958 |
| 4 L  | BLYTH            | BOB            |             | VK2XIQ  | PORT MACQUARIE   | -            |
| 5 O  | BRODIE           | BOB            |             | VK2EJK  | PORT MACQUARIE   | 02 6582.0592 |
| 6 O  | BROOKE           | AILSA          | (BILL)      | VK2FABJ | PORT MACQUARIE   | 02 6581.0547 |
| 7 O  | BROOKE           | BILL           | (AILSA)     | VK2ZCW  | PORT MACQUARIE   | 02 6581.0547 |
| 8 O  | BURGES           | ROY            | (JUNE)      | VK2YOR  | PORT MACQUARIE   | 02 6583.9349 |
| 9 O  | COULTER          | KEVIN          | (JUNE)      | VK2MAM  | PORT MACQUARIE   | 02 6583.8323 |
| 10 O | COURT            | RICHARD        | (LINDA)     | VK2CHC  | BEECHWOOD        | 02 6585.6866 |
| 1 O  | DANIEL           | JIM            |             | VK2FJKD | PORT MACQUARIE   | 02 6583.1933 |
| 2 D  | EKERT            | <b>BRUCE</b>   | (SUE)       | VK2EM   | EAST MAITLAND    | 02 4934 302  |
| .3 D | ELLIS            | STAN           | (BETTY)     | VK2DDL  | TUNCURRY         | 02 6554.799  |
| 4 O  | <b>EDMONDSON</b> | <b>CHARLES</b> | (PAT)       | VK2FSH  | PORT MACQUARIE   | 02 6584.049  |
| 5 O  | GILSON           | BARRY          | (FAY)       | VK2FBRG | PORT MACQUARIE   | 02 6583.881  |
| 6 O  | GLEESON          | <b>BADEN</b>   | (VALERY)    | VK2MOQ  | PORT MACQUARIE   | 02 6582.201  |
| 7 O  | GREEN            | <b>LEWIS</b>   | (PAMELA)    | VK2AG   | PORT MACQUARIE   | 02 6584.916  |
| 8 A  | GRAHAM           | PAUL           | (JANE)      | VK2FPRG | WAUCHOPE         | 02 6586.472  |
| 9 O  | GREENWOOD        | <b>GRAEME</b>  |             | VK2ZIS  | MIDDLE BROTHER   | 02 6559.483  |
| 0 O  | HADFIELD         | STEVE          |             | VK2DMX  | PAPPINBARRA      | 02 6587.616  |
| 1 L  | HANLON           | KEITH          |             | _       | PORT MACQUARIE   | _            |
| 2 O  | HANSEN           | JOHN           |             | VK2AYQ  | PORT MACQUARIE   | 02 6582.793  |
| 3 O  | HARDING          | DAVID          | (ISABELLA)  | VK2AIF  | WAUCHOPE         | 02 6586.498  |
| 4 O  | JANES            | LES            | ,           | VK2BAL  | PORT MACQUARIE   | 02 6583.378  |
|      | LINDSAY          | LARRY          |             | VK2CLL  | WAUCHOPE         | 02 6587.115  |
|      | LUNDELL          | HENRY          |             | VK2ZHE  | PORT MACQUARIE   | 02 6582.053  |
| 7 O  | MADIGAN          | ALLAN          | (DAWN)      | VK2OA   | WAUCHOPE         | 02 6585.204  |
| 8 O  | MARRIOTT         | JOHN           | (ROSE)      | VK2CIF  | NORTH HAVEN      | 02 6559.924  |
|      | MARTIN           | CRAIG          | (JENNY)     | VK2ZCM  | SANCROX          | 02 6585.345  |
|      | MCLEAN           | JOHN           | (CORRINE)   | VK2KCE  | PORT MACQUARIE   | 02 6584.622  |
|      | MEEHAN           | TERRY          | ,           | VK2KL   | PORT MACQUARIE   | 02 6584.299  |
|      | MILLS            | TIM            |             | VK2ZTM  | BEECROFT         | 02 9868.143  |
|      | MINAHAN          | CHRIS          |             | VK2EJ   | HALLIDAYS POINT  | 02 6559.351  |
|      | MONCK            | ARTHUR         | (WENDY)     | VK2ATM  | PORT MACQUARIE   | 02 6581.096  |
|      | NEIL             | JIM            | (CAROL)     | VK2VIV  | PORT MACQUARIE   | 02 6581.248  |
|      | NEWHAM           | LAURIE         | (ROBIN)     | VK2ELN  | PORT MACQUARIE   | 02 6583.538  |
|      | NUTT             | ALAN           | (ELAINE)    | VK2GD   | PORT MACQUARIE   | 02 6582.355  |
|      | PILLEY           | DAVID          | (DEE)       | VK2AYD  | KING CREEK       | 02 6585.264  |
|      | REES             | BRETT          | (YVETTE)    | VK2TMG  | PORT MACQUARIE   | 02 6582.595  |
|      | RICHTER          | ROY            | (- :,       | VK2YB   | VIA WAUCHOPE     | 02 6587.423  |
|      | ROTH             | BILL           |             | VK2CWR  | PORT MACQUARIE   | 02 6581.177  |
|      | SANDFORD         | NEIL           | (VERENA)    | VK2EI   | PORT MACQUARIE   | 02 6582.583  |
|      | SINCLAIR         | BILL           | ·           | VK2ZCV  | PORT MACQUARIE   | 02 6583.930  |
|      | TARRANT          | DAVID          | (AILEEN)    | VK2TBC  | ILUKA            | -            |
|      | THATCHER         | TREVOR         | `           | VK2TT   | WAUCHOPE         | 02 6585.227  |
|      | THOMPSON         | DES            | (BETTY)     | VK9FLHI | LORD HOWE ISLAND | 02 6563 215  |
|      | WALKER           |                | ·           | VK2HOT  | PORT MACQUARIE   | 02 6583.836  |

Category Key:  $O = ORDINARY \quad A = ASSOCIATE \quad D = DISTANT \quad H = HONORARY \quad L = LIFE$