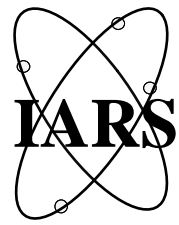


The Propagator



CLUB CALL VK2AMW
VOLUME 06/02 ISSUED JUNE, 2005. PRINTED BI MONTHLY
PRICELESS.

MEETINGS HELD SECOND TUESDAY OF EACH MONTH (EXCEPT JANUARY).
S.E.S BUILDING MONTAGUE STREET, NTH WOLLONGONG. STARTING AT 7:30PM.
THE PROPAGATOR IS THE OFFICIAL NEWSLETTER OF
ILLAWARRA AMATEUR RADIO SOCIETY INC.
PO Box 1838 WOLLONGONG 2500.
WEB PAGE - WWW.IARS.ORG.AU
E-MAIL - SECRETARY@IARS.ORG.AU
EDITOR- MAEVA BENNETT VK2HUG

EDITORIAL

Welcome to my first edition as editor of The Propagator, I hope you enjoy reading it and hopefully gain some new information about your hobby and your Club.

I can honestly say to put an issue of the magazine together is challenging to say the least, and I must congratulate our past editor, Dave Nelson, VK2TDN, for the effort he has put into making sure our Club had a magazine to be proud of.

If you can make any suggestions regarding what you would like to see or any information you would like to see in the magazine, please let me know and I will try to find answers or articles for your assistance and enjoyment. If you would like to contribute to the magazine, please send any article or question to me at my Email address or at the Monthly meeting.

Please be patient with me, my technical knowledge is limited, but I have good sources of finding out information, thanks to other Club members.

I am wearing my "L" plates so any help would be gratefully appreciated.

Maeva Bennett

THE ILLAWARRA AMATEUR RADIO SOCIETY INC EXECUTIVE AND COMMITTEE

Acting President: Rob McKnight VK2MT mcknight@winns.com.au 0408 480630
Secretary: John Bennett VK2AAL vk2aal@comcen.com.au ph: 4297 6065
Treasurer: John Lawer VK2KEJ ph: 4228 9856

Committee.

Geoff Howell VK2HIC (Public Relations and Publicity)
Boris Rewak VK2JJJ boza@ihug.com.au
Peter Reid VK2HPR vk2hpr@earth.net
Ned Macintosh VK2AGV criticalmass@hotmail.net.au
Daniel Brem VK2TAU dan@knowmore.com.au Ph 0419 288682

Fund Raising Committee. Geoff Howell VK2HIC, Peter Reid VK2HPR and Jack Desceso VK2XGD

Editor. Maeva Bennett VK2HUG vk2aal@comcen.com.au

Publicity Officer. Geoff Howell VK2HIC

Membership secretary. John Bennett VK2AAL vk2aal@comcen.com.au ph: 4297 6065

Repeater Committee. Rob VK2MT, John VK2AAL

Canteen. Peter Reid VK2HPR.

Web Master. Michael EckArdt VK2GNV, with help from Daniel VK2TAU.

A Thank You Tony Stone VK2TS

The Committee would to extend their thanks, and that of the membership of the IARS, to Tony for all his assistance to the Club, both as President and all his computer time and skill downloading the wave files for the Sunday morning and night broadcast. He gave to the Club his time, his effort and his support, which everyone appreciated.

Tony has stepped down to concentrate on establishing his own business but will still remain a member of our Club and on the airwaves.

An Antenna for the Space Challenged amateur operator.

Phil Grimshaw B.App.Sci, M.Litt. VK4KVK

Overview

Most amateur radio operators are familiar with the hassles of erecting a decent antenna in the suburbs. The author has set up antenna systems in just about all mainland states (VK1, VK3, VK8 and VK4) and in most instances was faced with the age old problem - big antenna ideas and very small backyards. This article introduces a new look at a familiar antenna concept - the small loop antenna.

For the last seventeen years the author has had more or less no backyard at all to put up any decent sort of antenna. HF Yagis were out, Quads were out. Anything that occupied any significant horizontal real estate was also out. So verticals have been the norm.

Of course, all this time not working the pileups on HF with a low QRN broadband HF antenna gave rise to lots of time to think about a solution. All those little challenges like: the neighbours wont like a big erection in the back yard, someone will complain to the council, the XYL will say it devalues the property, and a host of other reasons why it cannot be done.

The Quad-Folded-Dipole

From these hassles came the idea for the Quad-Folded-Dipole. The idea started out from some recent portable work I was doing in South East Qld off the bullbar of my 4WD with vertical loops. Before I knew it, the idea of the half wave dipole loop mounted parallel to the ground and maintaining all the nice features of wire loop antennas like low noise, not too impacted by near by objects etc etc gave rise to the quad-folded-dipole.

You can look at the quad-folded-dipole as nothing more than a conventional folded-dipole stretched in one direction to make it look like a conventional non-closed wire loop, or you can look at it as a small loop antenna like the conventional one wavelength loop technologies which quads are based on.

The net result is an antenna with an omni-directional radiation pattern, low noise susceptibility to QRM/QRN and the capacity for low feedpoint

impedance. Tests to date with respect to conventional dipoles suggest it performs just as well.

The test conditions were as follows: QFD mounted at 6 mtrs and fed via a 1:1 air core balun, half wave of coax at 20mtr, antenna tuner and rig.

Reference antennas were long-wire, 20 mtr dipole at about 8-10 mtr, a Windom at 8-10 mtr. Tests were simple - find a station with a fairly consistent signal, take S-meter readings on the various antennas and record the results. By no means overly scientific, but truly reflective of the actual amateur radio operating conditions - finding a signal, switching between antennas to see which one yields the best signal and then thinking about making a call.

To me honest - I was surprised the QFD at 6mtr was yielding signal reports as good as the dipole. I was expecting the 6mtr mounting height would impact the performance - but it matched that of the 20 mtr dipole I had set up.

For the space-challenged amateur the QFD should prove a breath of fresh air. It is very light and can be lifted by one hand and held at arms height with one arm. The central hub sprocket is designed to slide over 50mm OD aluminium tube with a snug fit. The idea behind this choice of tube size is so that the same hub-sprocket can be used to build Quads. Also - 50mm Aluminium tubing is readily available across the country and at reasonable cost and does not weigh very much.

Installation of the antenna comprises sliding the hub over the 50mm tube, erecting the tube on either the ground or a wall or roof of your house. Once the pole is freestanding, you fix the four fibreglass spreaders to the hub and then proceed to hang out the quad-folded-dipoles off the spreaders. Fix your 1:1 balun to the feedpoint of each dipole, run your coax to the balun and then hoist the antenna to operational height by raising the hub. Thats it

The QFD has a small tuning radius. The 14MHz version of the antenna has a tuning radius of just 186cm, the 10MHz version has a tuning radius of just

262cm.

Antenna Modelling

Antenna modelling was carried out using version 5.0 of the Windows-based 4NEC2 numerical electromagnetics code. Initial modelling considered 14.25MHz dipoles and 14.25MHz QFD mounted at the same height and using the same wire conductor diameter and over the same ground.

The following images depict the 3D far-field images and the vertical and horizontal radiation patterns for $\Phi = 0$ and 90 deg.

A. 14.25MHz standard dipole at 6mtr height. The following images (Fig-1 - Fig-3) show how the 4NEC2 modelling software depicts a 14.25MHz dipole. The images show the far-field radiation patterns of the familiar dipole and the current

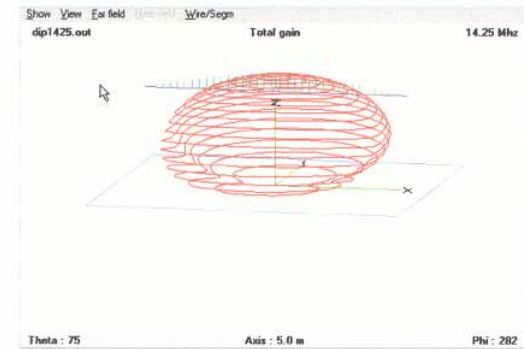


Fig-1

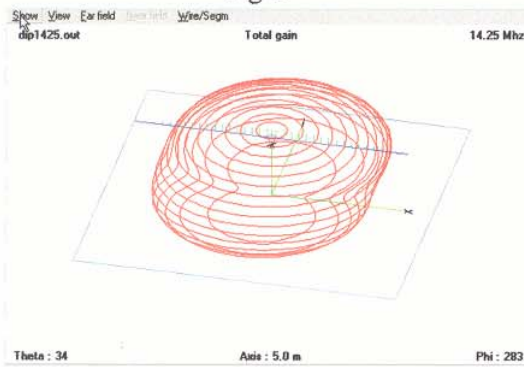


Fig2

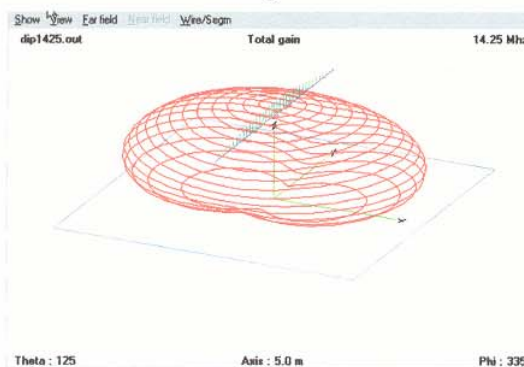


Fig3

distribution on the element. In these examples we have spun the dipole through 90 degrees to capture a feel for the radiation pattern of the antenna from various perspectives.

The next two images (Fig-4,5) depict the vertical

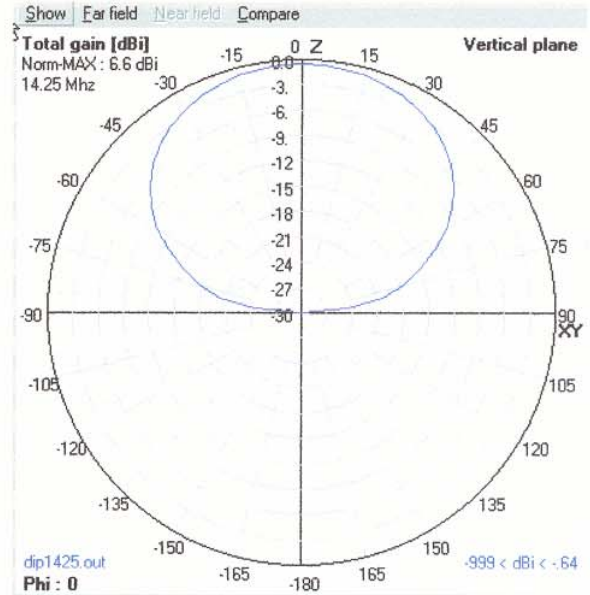


Fig4

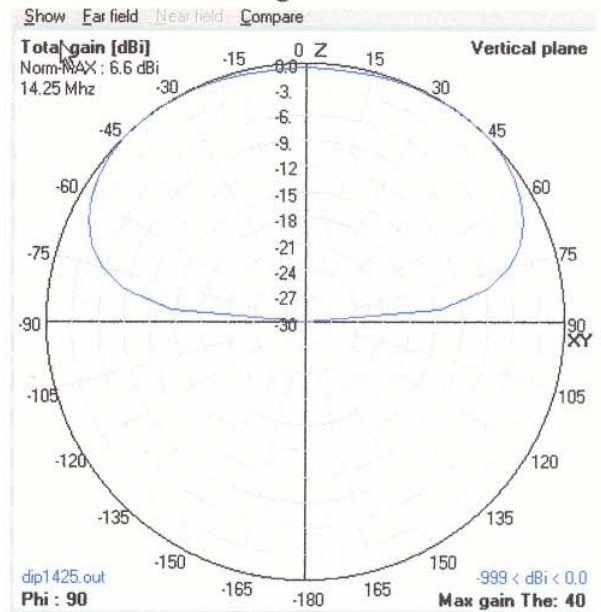
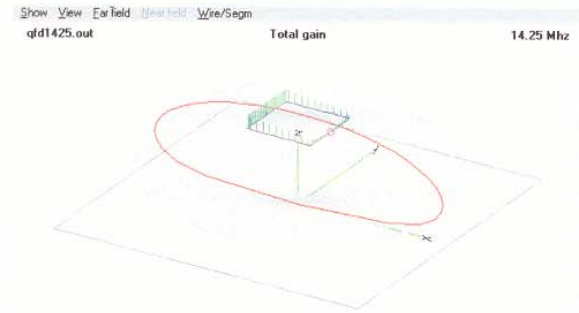


Fig5

patterns for Φ values of 0 and 90 degrees. We will now consider the same far-field patterns for the quad-folded-dipole. The frequency remains at 14.25MHz and the antenna height also remains at 6-mtr.

The 14.25MHz Quad-Folded-Dipole. The following images show how the 4NEC2 modelling software depicts a 14.25MHzQuad-FOLded-Ddipole

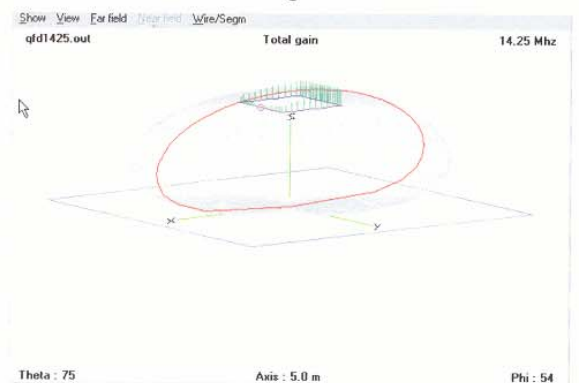
The first three images(Fig 6 - Fig 8) show how the QFD 3D pattern differs from the dipole. Whereas the standard dipole(Fig 1 - Fig 3) has the familiar figure-8 pattern in a plane perpendicular to the axis of the dipole, the QFD has a much more rounded pattern, ie it is omni-directional. Note also the current distribution has been plotted.



Theta : 48 Axis : 5.0 m Phi : 301
Fig6



Theta : 65 Axis : 5.0 m Phi : 24
Fig7



Theta : 75 Axis : 5.0 m Phi : 54
Fig8

The next two images(Fig 9, 10) depict the vertical patterns for Phi values of 0 and 90 degrees. Note that the vertical plane pattern for Phi=0 is similar to the

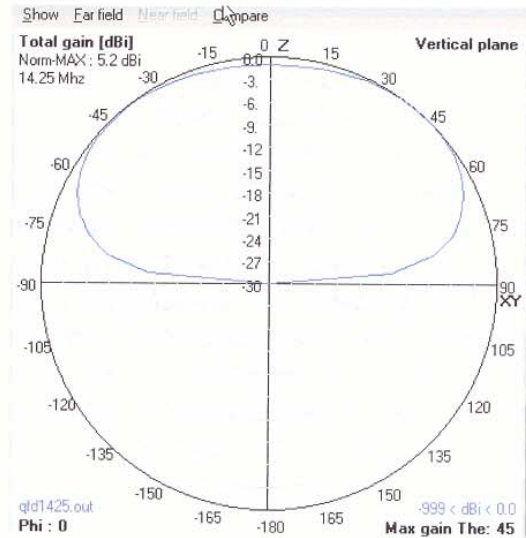


Fig9

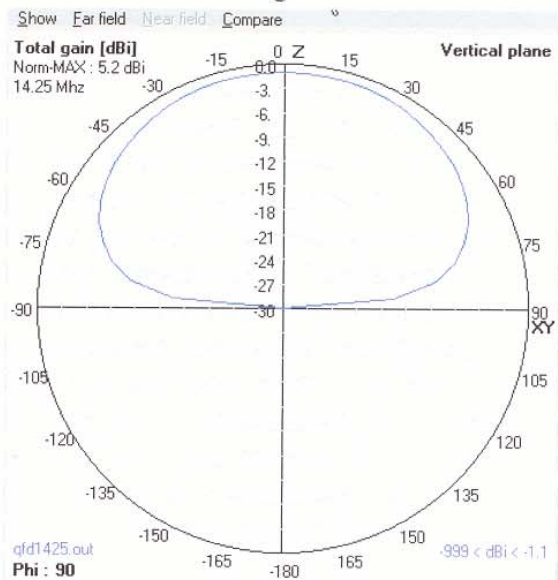


Fig10

standard dipole pattern except it is a little flatter with a lower angle of radiation for the QFD

Similarly, the vertical plane pattern for Phi=90 is very similar to the standard dipole pattern as shown in Image Fig-10.

So, whereas the standard dipole has a lower radiation strength in the X-axis where the X-axis is along the direction of the dipole, the Quad-Folded-Dipole exhibits a more or less equal radiation pattern in all directions with no favoured quadrant or region. The 4NEC2 modelling software reinforces the belief that a

half-wave wire loop has an omni-directional radiation pattern with no favoured direction. This is great news for the amateur operator looking for a general purpose general coverage (radiation-wise) antenna.

Summary: An introduction to a new style of antenna based on the small wire loop was discussed. The antenna was introduced and some attempt was made to describe it.

A discussion of the tests performed were then explained comparing the QFD with standard dipoles and other simple wire antennas. Antenna modeling software was used to compare designs. Specific data was presented comparing standard dipole radiation patterns with that of the QFD.

The antenna will be subjected to ongoing tests. Plans include 10MHz versions. Thoughts are also being given to a 7 MHz version with a turning radius of 370cm - still not too large to deal with given the low weight of the design.

For making 4NEC2 v5.0 available, I wish to thank Arie of Holland who can be contacted via email at 4nec2@gmx.net. This article has assumed some familiarity with the NEC and derivative antenna modelling software available to amateur operators. NEC is an advanced antenna modelling program originally developed in the 70's and 80's at Lawrence Livermore Labs< CA, USA and sponsored by the Naval Ocean Systems Center and the Air Force Weapons Lab.

More information is available to interested readers if they contact the author via email at: phil@kvkantennas.com.au Quad-Folded-Dipole is a trademark of KVK Antenna Systems.

- *The editor would like to thank Phil Grimshaw for allowing this article to be reproduced in The Propagator. Phil has written a book "VK Antenna Handbook" which is available in either hardback or on CD Pdf format and is available for sale through his website www.grimshaw.net.au.*
- *Phil's website also contains a heap of interesting information regarding ham radio, as he has been a ham for over 30 years and is actively involved in furthering and encouraging the hobby to all.*

Now for a little light entertainment.

A Stress Test

Hope you find this useful!

Just in case you've had a rough day, here's an 8 step stress management technique recommended in the latest psychological texts. The funny thing is that it really works.

1. Picture yourself near a stream.
2. Birds are softly chirping in the cool mountain air.
3. No one but you knows your secret place.
4. You are in total seclusion from the hectic place called "the World".
5. The soothing sound of a gentle waterfall fills the air with a cascade of serenity.
6. The water is crystal clear.
7. You can easily make out the face of the person you're holding underwater.
8. See! You're smiling already.

Diets & Dying

The Japanese eat very little fat and suffer fewer heart attacks than the British or Americans.

The French eat a lot of fat and also suffer fewer heart attacks than the British or Americans.

The Japanese drink very little red wine and suffer fewer heart attacks than the British or Americans.

The Italians drink excessive amounts of red wine and also suffer fewer heart attacks than the British or Americans.

The Germans drink a lot of beers and eat lots of sausages and fats and suffer fewer heart attacks than the British or Americans.

CONCLUSION: Eat and drink what you like – Speaking English is apparently what kills you!

Past Present and Future

Our Club was first formed in 1948 (nearly 60 years ago) by the grouping of like minded amateur radio operators in the Wollongong area, with the founding president, Howard Booth, and others making their own "ham" equipment, as it was too expensive or impossible to purchase. It was the boom time of the Cookbook and home brewing. By the end of 1948, the Club had set up VK2AMW, a major feat for such a small, financially strapped group.

Over the next 57 years the IARS has been a very active and community based hobby group that evolved to assist in various projects, Earth Moon Earth, and worked closely with the Wollongong University, Contest participation and wins, not to mention have a chat with others who also enjoyed the hobby of amateur radio.

We have many present and past members of our Club, that worked very hard for what our Club achieved, to name a few, Howard Booth, Greville Dennys, Lyle Patterson, Graham Dowse, Keith Curle, Basil Dale, Rob McKnight and Norm Deitch. These amateurs put in the hard yards to establish a Club that all members can be very proud of, with a repeater system second to none.

But what now? Our membership is dwindling at a rapid rate, our members do not support the Club with their participation at meetings or events. Politics has become a major component of the meetings and our Club is self destructing.

Your committee over the past few years have worked very hard to maintain the Club at its present enviable situation. The Club licences, maintains and hosts 6 repeaters in the South Coast, a major feat for such a small Club. They are reliable and can be depended on to work, if they do go off air, your Repeater Committee do everything in their power to get them back on line, as soon as possible. For the first time, in a long while, the Club has a good bank balance to continue to maintain the infrastructure of the Club.

Could all this hard work be a thing of the past? Without the support of the membership, the bank balance dwindles, the repeaters fail and then all suffer as without a repeater or a Club aerial, there is no local amateur radio.

I realise that to use the airwaves, you only have to have a current financial ACA licence, you do not have to belong to any organisation but think what would happen if there were no local clubs? The majority of all Clubs in Australia own a repeater, which is available for everyone to use, you can travel around the world and Australia, and are welcome on the airwaves to "CQ".

The ham system is a vital part of Australia's and the world's communication system, be it to get aid for tsunami victims in Asia or to get help in finding your way around Sydney. It has been the source of a great many friendships, but you might never have met personally, only on the airwaves.

It is time to think about where our Club is heading in the future. I was talking to Wal Kelly (VK2ZWK) and his wife, Lyn, President of the Fishers Ghost RC in Campbelltown, at the Picnic at Cataract Dam on the 15th May. Their Club has gone from 150 members to 9 and now up to 15. They are worried about their Club surviving in the future, but they still do a lot of good work for the Scout's supplying and maintaining a radio shack at the Cataract Dam, providing training and creating an interest in the future generation of hams, the scouts, in amateur radio.

Does our Club want to become another victim of the Australian apathy? Does the saying "I'm alright, Jack" really have significance in our Club?

Any Club is only as good as those that support it, through the good and bad times. It's time to work together for the good of your hobby. If amateur radio is to remain a viable hobby in these times of changing methods of communication, the mobile telephone, the internet etc, interest must stay strong in putting forward a united and harmonious Club that attracts the like minded and those interested in the hobby, that way the hobby can grow.

Without support, the IARS - our Club, is like any other living thing, it droops and finally falls to the ground and gives up. To quote the poet T S Elliot, do we go out not with a bang but with a whimper? I personally, would like to go out with a bang.

Together, as our Club has done in the past, working as club and team, we can achieve miracles.

NEWTEK ELECTRONICS
 Phone and Fax 4227 1620
RESELLER FOR
 Altronics Arista Jaycar Avico
 Stockists of: Alarm Accessories, UHF Antennae,
 Tools, Computer Accessories, Test Equipment,
 Cables, Plugs, RF Sprays and Components for the
 Professional and the Amateur
 Call in and see Jack at 345 Keira St., Wollongong



From the Secretary's Desk

I have been sitting here, looking at a blank "sheet of paper" and thinking how to start this issue's "From the Secretary". I was wondering what to put in this time, and then my thoughts took a change of direction – not unusual for me. I started to think about the people who make our Club what it is.

The first name that popped into my head was, Rob McKnight VK2MT.

There is an age old saying – "If you want something done, give it to a busy person.", and Rob fits that description to a tee. Rob has been active in our Club for many years as both a member and head of the Repeater Committee, to the extent that we would not have the repeaters or the Club we now have without Rob's continued effort and determination. For his efforts Rob, was made a life member of our Club a few years ago.

This year, Rob added another job to his very busy schedule – Vice President of our Club. When you take on this role, you think that you would have to chair the occasional meeting when the President can't attend, no big deal. But.....when the President resigned from the Club, Rob became Acting President. It reminded me of when JFK was shot by Lee Harvey Oswald and Lyndon B Johnson took over, or the disappearance of Harold Holt and William McMahon took over the job of Prime Minister of Australia, not a usual event.

Away for his extensive Club activities – this week alone – Saturday working on the repeater at Knight's Hill with John Bennett VK2AAL, Tuesday night chairing the committee meeting and then on Thursday, going to Maddens Plains with an ACA radio inspector, looking for causes of interference and freezing his butt off! I must add, Rob leads a very full and active life with many other commitments. He manages to fit in – son, husband, and a father of 3 active boys, Operations Manager for WIN TV and Akela for Cub Scouts. Not a bad effort for one person, who like us, only has 24 hours in a day. I can understand why Rob likes camping for a holiday, but even then he has to take his mobile phone in case of problems at WIN, "far away, with time for his boys and his wife, alone without interruptions".

When Rob became Acting President, he took over at a very awkward time but with his usual balanced, fair and businesslike approach, he steered the Club through the difficulties with great knowledge, thought and aplomb. He stated that he would have to rearrange his schedule to be the President, Cubs meet the same night, and he did. I glanced at his ever present diary at the May Committee meeting and looked at what he had to fit in given any particular day, and I saw one red entry in it for the day amongst all the black and blue – IARS Committee Meeting. As Rob says, "If it's not in the diary, it doesn't happen".

Rob, from all who come in contact with you, thank you, on behalf of past, present and future members, for all you have done, are doing and no doubt will do in the future for the IARS. Your role, your unselfish efforts on

behalf of the Club are like an aerial to a radio – always pointed in the right direction, sending out and receiving strong signals, using your beam with precision and guidance, without one a radio is very short sighted.

PS. Rob, you are excused for not writing a Presidents Report.

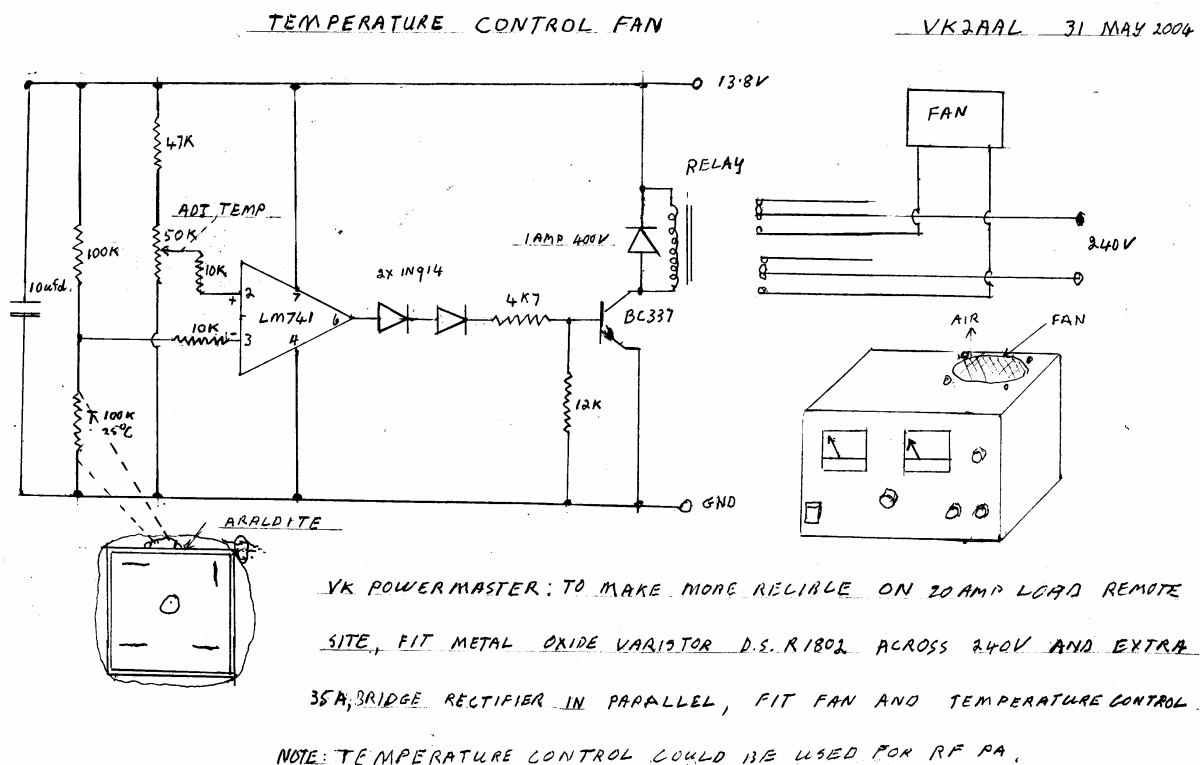
See you at the June Meeting.

Regards

Maeva Bennett
VK2HUG
Assistant Secretary

For the Homebrewer

Thanks to John Bennett VK2AAL



Cataract Dam 15th May, 2005

The day started off for me very early, as I watched the sun rise in the eastern sky, be it through the dark stormy clouds, especially in the south. From the window in my study, I can usually see the ocean, the rocks, North Shellharbour beach, birds flying in the sky and Saddleback Mountain, a view that never fails to inspire me. But all I could see was dark threatening clouds gathering over Saddleback. Not a good outlook for a picnic day.

After saying goodbye to my sister in law from New Zealand, who was leaving to return home that morning, I was heartened to hear it was bright and sunny in Sydney. Practicality set in, and a quick check of the Weather Bureau and a study of the rain fall patterns and synoptic chart on the internet, and it we decided to get organised

for a delightful day at Cataract Dam and catching up with old friends and making new, the members of the Fishers Ghost RC.

BBQ packed, knitting in the car, portable radio in his pocket, John and I set off, towards the Cataract Dam site, listening to the Sunday morning broadcast as we travelled north.

When we arrived, it was surprising to see how many others had the same idea. There were lots of people also enjoying the picnic grounds, but we managed to find space at the Koala Shelter and were soon joined by Wal and Lynn Kelly, (VK2ZWK), President of the Fishers Ghost Club. They were sure they could find the picnic site, just look for the aerials!

We were soon joined by Boris (VK2JJJ) and Zora Rewak and their 2 boys, Anthony and Alan, Peter (VK2HPR) and Leigh Reed, and Ted Powell (VK2JAU) and Les Simmons (VK2TJ) from Fishers Ghost Club.

The site is still amazing – hot water on tap, lots of tables, benches and shelter, free BBQ's and to quote Boris, "Wow, the BBQ plates are like brand new, they are so clean!"

After a chat and cuppa, it was time to BBQ, and all enjoyed a delicious meal and the good company. The atmosphere under the shelter was one of a group of good friends who enjoyed each others company, which we did. One of the things that struck me was the "sharing" of not only good company, but the sharing of ideas and the feeling of well being. Everyone shared what food they had bought, so all enjoyed a wonderful lunch. There were laughs at the usual forgotten things – the BBQ scraper, the knives to cut your meat with (I did that one), the coffee etc but everyone chipped in and no one was left out or wanting.

After lunch we drove down to see for ourselves the sorry state of the water levels in the dam. It was so low, that for the first time, you could see the rocks and the old water levels and the decline of the levels in the sides of the dam. As we walked along the dam, we saw the life rings on the wall, just in case you fell in, I doubt at the current levels that the rope on the rings would be long enough to reach you or that you would survive the fall!

Fishers Ghost Radio Club maintains the Radio shack at the Cataract Dam Scout Camp site and asked if we would like to see it. It was an amazing site, a concrete brick building that housed the shack with multiple working stations built around the wall, certificates of participation at various Jota's, QSL cards and information about Amateur Radio around the walls in 2 languages – French and English. The most interest, was however, outside. The aerials that had been erected were incredible, enough to make any ham green with envy.

There was a 20 metre mono band beam, a 15 metre mono band beam and a ten metre, all on separate poles with rotators and a discone antenna for VHF and positions to fit a 6 metre antenna. These were also 80 and 40 metre wire antennas. All the aerials were set atop very high telegraph poles and the sky above them is crisscrossed with guy wires. It was reported that they get good results from this site on all bands. With all these aerials, they are still planning more to improve the range and variety of contact for the scouts enjoyment. The site is used for Jamberoo's and Scout camps and by Fishers Ghost Club.

John also inquired about the possibility of establishing a link to 80 metres for both our Clubs and amateurs as a whole.

After finally dragging the boys away from the aerials, we said goodbye to our new friends from Fishers Ghost Club and headed south for home – and I realised, I had taken my knitting but I enjoyed the company, the sights and the day, so much – it had never even made it out of the bag.

I must thank my hubbie, John VK2AAL, for helping me describe the aerials. Even though I have my Novice Licence, an aerial is still a piece wire in the sky! Needless, to say if you need help with your radio or any ham equipment, believe me, I would be the last person to ask. I am still waiting for lessons on how to use a radio from John!

John and Maeva Bennett
Vk2AAL & VK2HUG



Christmas in July

This year we are going to try something different. It was suggested to the Committee, by Peter Reid, VK2HPR, that we celebrate Christmas in July.

The Committee looked into various venues to hold this even but unfortunately, our numbers would be so small that they could not offer us a private room or if they did the costs would be prohibitive. So an alternate venue had to be chosen. John Bennett, offered to host the event at his home.

When: 7.00 pm
Friday, 15 July, 2005-05-20

Where: 44 Shellcove Road
Barrack Point

Food: Traditional Christmas Dinner with all the trimmings

What to Bring: A plate of Christmas Goodies
Your drinks

Cost: \$5.00 per head (towards Club funds)

RSPV: By 10th July
146.850 VK2AAL or VK2HUG
Email: vk2aal@comcen.com.au
Phone: 42 976065

Everyone, including the family, is welcome. There will be DVD's etc for the Children to watch if they get bored with listening to a lot of talk.

Suggestions regarding what food to be served will be most gratefully accepted.

The Calendar

Make sure you mark these in your diary.

June

14th Monthly Meeting at the SES Hall, North Wollongong
Guest Speaker – Barry Fittler VK2DLI
Coffee/Tea Cake supper night at a cost of \$2.00 per member

22nd Committee Meeting at the SES Hall, North Wollongong

July

12th Monthly Meeting at the SES Hall, North Wollongong
Guest Speaker – Rod McCosker VK2DOT

15th “Christmas in July” at John and Maeva Bennett’s home at Barrack Point

20th Committee Meeting at the SES Hall, North Wollongong

The Club News Page

- 1 Geoff VK2HIC and Jack VK2XGD are working hard at producing a quality Tuesday Night broadcast of all members to enjoy, a news broadcast that is specifically for the Illawarra Amateur Radio Society, that many enjoy. Geoff and Jack are looking for items that can be broadcast and for anyone interested in joining the broadcast team. If it interests you, it will interest others. So please help out, it's your broadcast.
- 2 All the Club repeaters are working well and the repeater committee, Rob VK2MT and John VK2AAL have spent time "tweaking" the system to help stop any interference.
- 3 The Club has been notified that the new facilities at Mt Boyne are ready to move into and the Repeater Committee is looking at a weekend to change our equipment to the new site.
- 4 The IRLP is still down but a solution is near.

Guest Speakers.

This year our Club has been very lucky to have had a guest speaker for all our meetings. To be a guest speaker, takes a lot of time and effort. You have to plan what you are going to say, bring equipment to demonstrate and settle nerves at the prospect of standing at the front of a room speaking to your peers, in no way an easy task.

Our Guest Speakers, Graeme Cashion (VK2QI), Max Riley (VK2ARZ), Rob McKnight (VK2MT) and John Hodgkinson (VK2HBO) have all generously given to the Club their time and their knowledge for the enjoyment and the information of our members. Each of these Club members, yes they are all IARS members, exemplify what being in a Club is all about, the sharing of knowledge with others.

On behalf of the Club and its members, thank you to you all for your generosity and time, and please know how appreciated your talks were but all those who attended.

- 1 Our Guest Speaker for June is Barry Fittler, VK2DLI. He will be talking about "The 3G telephone System", which allows for the transfer of data over the phone system in such a way that your camera can become a movie camera and you can send and receive on the internet.
- 2 Rob McCosker will be our July Guest speaker on a topic to be decided.

Home brew Night

Our August 9th Monthly meeting is to be a Home Brew Night. Members are invited to bring their latest homebrew creation to share with other members.

If you need inspiration or help, this is the night for you to come.



Coffee/Tea & Cake Night

June Meeting
Tuesday 14th June, 2005

Cost \$2.00

Many thanks to Michel's Patisserie
at Warilla Grove
For the cakes



This is a fund raising effort to keep
our repeaters
On the Air

Thank you for reading my first go at being editor, hope you enjoyed it.
Maeva