



NERG NEWS

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PO Box 270
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WHAT'S ON THIS MONTH - THE NERG SWAP MEET

This week Jim Baxter, VK3DBQ, has offered to talk about IPS charts and Electronic QSL'ing. Both of these subjects are important to the modern DX hunter. You have probably seen the HF prediction charts published in the back of AR magazine and in the new ESR magazine (with coloured maps!). These charts are produced by the Ionospheric Prediction Service (ISP) and contain a wealth of information. You'll need to hear Jim's talk though to extract the hidden secrets held within for the serious DX'er.

Once you've made a few DX contacts the next challenge is to confirm them. (DX, *dē'eks*, *n.* abbreviation for distance, used in Morse Code : a far off place or point). For about 100 years radio operators and short wave listeners have been confirming reception of distant signals by send each other QSL cards through the post or via the QSL bureau. (QSL, *ku-es-el*, *n.* abbreviation for acknowledge receipt, used in Morse Code).

Right now DX'ing is undergoing a revolution in the way contacts are verified. The Internet has become so pervasive that electronic QSL methods are now possible. They promise to radically speed up the process of exchanging QSL "cards" and reduce costs into the bargain. Jim will explain how to use these services to confirm your next QSO for your DXCC collection in no time at all.

See you around 7.45pm on Thursday, 13th November at Briar Hill Primary School, Gladstone Rd, Briar Hill (Melway 21-B3)

WHAT HAPPENED LAST MONTH?

Once again the NERG enjoyed the pleasure and fun generated by a "White Elephant night". The night was made more enjoyable by our having the company of many WANSARC members who like the NERG had many treasures to offer for swap, sale or for free.

The night started with a minor hiccup when it was realized that the room booked for the night was double booked and that the school was in fact also holding a meeting there as well. It was readily overcome when Ross, the Headmaster, offered us two adjacent rooms to use instead and the use of their staff room to have our tea and coffee. We filled both rooms to overflowing, many members literally brought carloads full of goodies. Items ranged from transceivers, Test equipment, TV gear, car radio accessories, radio parts, plenty of coax and other mystery cables.

In true Amateur spirit many items were given away to others who needed them and would make use of them (including quite a few ancient elephants of various descriptions).

AT THE NEW MEETING ROOMS:

BRIAR HILL PRIMARY SCHOOL

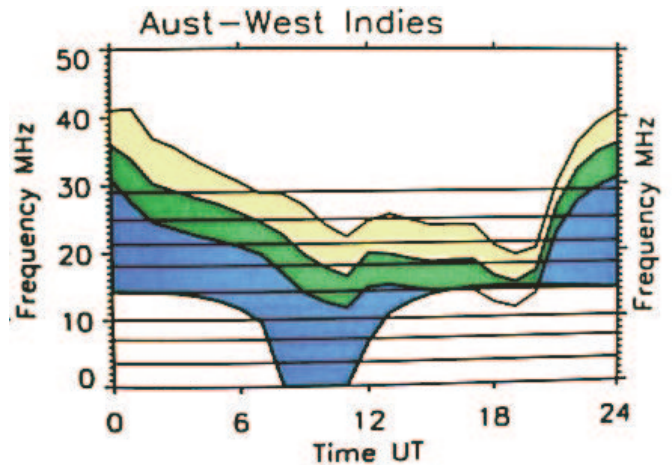
7.45 pm, Thursday 13th

November 2003

All about IPS charts

&

Electronic QSL cards



Having supper in the staff room allowed for all to catch up and swap stories new and old on what they had acquired or "moved on". Keep your eye out for the next one and be ready with your very own elephant or two.

Our next meeting is on November 13 and our guest speaker is our very own Jim VK3DBQ who is going to enlighten us on what all the Ionospheric prediction graphs really mean in the DX'ing world. This will be yet another night to look forward to and I am sure that Jim and others will be able to keep us abreast of the latest happenings within WIA Vic and in the interaction with the ACA.

See you at the meeting next Month.

Don, VK3KDT

LOOKING AHEAD - DECEMBER BBQ

Wow! Is it that time of year already? The Christmas BBQ is a tradition where NERGs and their families get together for a friendly evening of talking and enjoying good food and drinks. This year we invite all past NERG members to the BBQ as well - please pass on the invitation.More on the BBQ next month.

ACA LICENCE REVIEW

The ACA's "road show" meeting held in Melbourne on 8th Oct to discuss future plans for amateur licenses was standing room only!

The ACA put their arguments and allowed time for some questions from the audience. Unfortunately discussion of the interference issue was cut short by the closure of the meeting at the predetermined time, leaving many amateurs wondering just what the intended policy is.

President of the NERG, Greg Williams, prepared the following submission to the ACA after discussions with the committee and many other NERG members.

We are all holding our breath for the next exciting(?) step....

NERG Submission to the ACA in reference to the Review of the Amateur Service:

The North East Radio Group (NERG's) would like to thank the ACA for the opportunity of commenting on the Review of the Amateur Service. A number of our members attended the Information Session in Melbourne and this assisted us greatly in understanding the ACA's position and some of the detail that was not obvious.

Our member's major concern relates to the proposal surrounding the "no interference policy". It could change the thinking of many who would balk at making the investment in both time and money to become an amateur when problems with possibly inferior equipment could result in severe curtailment of amateur operations. As a club we totally oppose the proposition to introduce a 'no interference' policy for amateurs. We believe there may be alternatives to resolving recalcitrant cases and would welcome participating in further discussion on this issue.

Below are our detailed submissions on each item in the Review of the Amateur Service.

Re: 5.2 Content of amateur communications

Our comment here relates to the control of repeaters/beacons and other such devices – such control signals should fall into the same category as amateur satellites and encryption be permitted, particularly when these are in the same country.

Re: 5.3 Third party communications

We support the removal of the prohibition on third party communications to another country.

Re: 5.4 Morse code

We support the removal of the Morse code requirement which would result in the combination of the AOCPC & AOLCP Grades and the NAOCP & NLAOCP grades. We suggest that similar action as was taken when combined licensees were granted full HF privileges be used to enable this to take place immediately.

Re: 5.5 Qualifications – minimum competence level

Our club has discussed this matter and believe that the current syllabus for the NAOCP is far too complex and detailed. Intricate knowledge of the internals of a transmitter and receiver is no longer required for this hobby. Modern transceivers that are microprocessor controlled and use large scale integration are not easily modified or repaired by the average amateur. A syllabus focusing on an understanding of the main blocks of a transceiver and emphasis on operating techniques and electrical & RF safety would make much more sense. Please refer to our comments under 6.1.1

Re: 6.1.1 Foundation Licence

The NERG supports the establishment of a Foundation Licence we believe that an examination only would be best method of assessment (The club currently conducts classes and we would expect this to continue) we do not believe that mandatory attendance at a class would be feasible in the Australian context. The bands and limitations that would be available to this class of licensee has caused some discussion however the committee believes that access to all bands should be granted using commercial equipment with a maximum power of 100 watts (this allows operators to use a wide range of currently available equipment).

The committee also believes that there should be a second class of licence which requires additional theory elements and that licensees in this class would have additional privileges such as higher power and be permitted to use home built or modified equipment. Current holders of any class of licence would automatically qualify for this second tier licence. Some members believe that there should be three tiers of licence but the majority are for a two-tier system. We are of the opinion that there could be some added incentive for amateurs to move to this

second tier. Something like the maximum power of transmissions along the lines of the USA would be appropriate. Naturally the RF exposure standards would have to be met by any such station.

Re: 6.2 License types

The information meeting that was held in Melbourne clarified the differences between the Apparatus and Class licences, this was greatly appreciated. We believe that the Class Licence would be appropriate particularly as all the current licence conditions would be shifted across.

Re: 6.3 Examinations, certificates, call signs and locations.

The proposed outsourcing of the management of these activities appears to be a reasonable approach as has been demonstrated by the WIA running examinations. In general we support the opening up of call signs however we can see some issues with what are considered "valuable" call signs and believe that there should be some equitable form of allocating them; this could be a ballot, auction or simple first come first served system all have strengths and weaknesses.

Any body that was to manage these important aspects of licensing would have to offer a national service and have appropriate auditing and internal governance requirements to ensure that the process was fair, equitable and with the minimum possibility of fraud.

Re: 6.4 Reciprocal licensing

We support Australia participating in the CEPT T/R 61-01 and as we support class licensing we also support the class licensing of visiting overseas amateurs.

Re: 6.5 Interference protection

Nearly every member of our club was shocked, outraged and very concerned at the proposal as it existed in the discussion paper. Those that attended the information meeting found that what was proposed was a little different and from what we have heard from amateurs interstate there was a modification of the ACA's position from meeting to meeting.

Our members are very concerned that one neighbour purchasing some piece of domestic equipment (no definition given) to which the amateur causes interference can result in the amateur being put off the air.

Establishing an amateur station can be a substantial investment in both time and money. Most new amateurs attend a course for around 6 months to obtain their licence then they have to purchase a transceiver, power supply, antenna and accessories. If a beam antenna is used then a tower may also be purchased. This amounts to an investment of around \$8000 to \$10 000.

In looking at the ACA's proposal and what was said in the Melbourne meeting our understanding is as follows:

- There are a number of disputes concerning interference that are almost impossible to resolve – the number of '10 or so' was mentioned at the meeting.
- To be able to resolve these the ACA wants to be able to tell the amateur to cease transmitting
- There are no Electro-Magnetic Compatibility standards for domestic radio and television receivers
- The examples of domestic equipment in the discussion paper includes items which have nothing to do with radiocommunications such as stereo systems, computers and wired telephones

We believe that it should be possible to resolve cases of interference without having to resort to restricting the amateur's operating. A minimum technical requirement should be established for various radiocommunication services such as TV and radio. These requirements would include outdoor antenna, co-axial feed line and a minimum signal strength to the receiver. Once a person experiencing interference has established that they meet these requirements then the ACA should become involved and attempt to resolve the situation. This is the current system which seems to operate effectively in the overwhelming majority of interference cases.

The ACA has responsibility for enforcing the Radiocommunications Act and so where they are aware of a station causing interference that is not prepared to comply with the Act and regulations then the courts are the place to obtain an appropriate order. If there is no breach of an act or regulation then it may be necessary to introduce new regulations that detail requirements for equipment that is suffering interference. Giving the ACA the power to simply "put a station off the air" seems to be making them the judge, jury and executioner.

As we were told there was only a small number of cases where this would be required we suggest that the ACA pursue other avenues of dealing with these situations.

Greg Williams

President North east Radio Group Inc

THANKS FOR THE HELP

Frank, VK3DTC, sends many thanks to John VK3ZRV and Don VK3KDT for helping him transport his "White Elephants" to the NERG sale and set up his table. Frank says he now has much less stuff to fit into his new, smaller, QTH. His neighbours are pleased to see the elephants move out too!

EXAMS COMING SOON !

As part of it's Novice classes, the NERG is running exams around mid-November. Exams are also open to anyone else that requires them, including full call theory and 10 WPM Morse. Bookings will need to be made very soon so that exam papers can be ordered from the WIA.

Contact Greg Williams, 9432 0563, for dates and charges

TUESDAY MORNING TEA GROUP

The Gainfully Unemployed met on Tuesday the 28th October at the home of Steve, VK3JSE.

Those present were Gerhard, Alan, Dave, Jim and Mark-XXX. The conversation was endless with many radio related issues explored while coffee and endless supply of nibbles for all tastes were applied. The Catering Officer Betsy VK3DBQ performed up to her usual high standard. We are all very thankful for the efforts of both Steve and Betsy.

The final meeting of the group will be the fourth Tuesday in November being the 25th at the QTH of VK3EWM, Gerhard.

73, Jim VK3DBQ

(Listen out for Jim, VK3DBQ, on the NERG net frequency 146.575 MHz if you need directions or call him on 9467 1253).

ARDF EVENT - SUNDAY 9TH NOV.

This is the final ARDF (radio orienteering) event prior to the Region-3 championships commencing at the end of this November. This is also the last chance to shake out any remaining issues with the transmitters before R3.

This event will be held in conjunction with the Orienteering TK Metro 9 event at Brimbank Park, Keilor (Just off the ring road)

Both 2m and 80m events will be available (so even the course setters can compete!). Adam Scammell is setting the 2m VHF event, and Greg Williams the 80m HF event.

When: Sunday 9th November, 10:30am-1:00pm

Where: Brimbank Park; Melway 15 B10
Enter park from Keilor Park Dve. Follow 'O' signs.

What: 80m HF 3.580MHz, traditional 5 transmitter ARDF
2m VHF 145.3MHz, traditional 5 transmitter ARDF
Runners and Walkers courses

Cost: Adult:\$8, Junior: \$4, Family: \$20
(VOA members): \$5 \$2.50 \$12.

Note: If you do the orienteering course as well, keep your map and pay only \$2 extra to do an ARDF as well.

Sniffer Hire: \$2 Please email brucep@netspace.net.au to arrange hire.

This is the last chance to get in a bit of practice prior to the Regional champs on the band of your choice !

Cheers, Bruce VK3TJN

AUSTRALIAN ARDF CHAMPIONSHIPS

The Australian ARDF Championships for 2003 went pretty well according to plan and a good day was had by all. The location was Slatey Creek, near Creswick, not far from Ballarat in the state park. This area had obviously been heavily mined for gold back in the 1800's, with the remains of many filled-in mineshafts and mullock heaps. Since then the gum trees have grown back into a fairly sparse forest with low undergrowth. Weather was fine but very cool.



Some of the ARDF champions! Sue Diggins, Brian Acerley, Adam Scammell, and Bruce Paterson (front)

The event was a good test for the transmitters and timing systems that will be used at the International event later this month. A software glitch put the homing beacon off air shortly after it was switched on, but this has been fixed. The electronic "SportID" tag used for timing displayed a curious problem when read at the finish line, having to be read twice before the data could be extracted.

Other than that, the event went very well, although some of us are convinced that some of the gold has been absorbed by the trees, making them excellent radio reflectors - signals appeared to come from everywhere!

First places went to:

Male Open - Adam Scammell
Male Seniors - Dennis Hauspser
Womens - Sue Diggins

Name / class	F	T	L	S	Time	Finish
OPEN						
Adam Scammell	5	50	0	50	01:20:41	
Bruce Paterson	5	50	0	50	01:23:49	
Brian Ackerly	4	40	0	40	01:39:20	
Roger Lewis	4	40	0	40	01:48:44	
Tony Langdon	3	30	0	30	01:46:10	
David Beard	1	10	190	-180	02:18:14	DNF
SENIORS						
Dennis Hauspser	3	30	0	30	01:48:42	
Ewen Templeton	3	30	0	30	01:53:00	
Mark Harrison	1	10	0	10	01:53:44	
Mike Hubbert	3	30	40	-10	02:03:40	DNF
Graeme Pattie	1	10	310	-300	02:30:10	DNF
WOMEN						
Sue Diggins	2	20	0	20	01:43:31	

For more on ARDF, visit the Victorian ARDF Group web site at: <http://www.ardf.org.au>

ECHOLINK ON VK3RMH

The NERG's 70cm repeater is back on the air after an extended visit to the doctor. Not only is it back on air with the usual IRLP service, it now has connections to the Echo Link network as well.

VK3RMH's new EchoLink node number is 140587

So what is EchoLink? It is a computer program that links home computers together over the Internet so that you can hold a voice conversation in a way similar to amateurs talking to one another via radio. It was originally intended as an alternative communications method for amateurs, especially those without access to radios. It's similar to other internet phones like iPhone but is strictly for use by licensed amateur radio operators.

How is it different from IRLP? IRLP can only link one repeater to another repeater over the Internet (there are also a few simplex radio nodes but they are essentially treated as repeaters.) Nets between more than two repeaters are possible but must be held through a special "reflector" node. In general it is not possible to use the IRLP network without a radio.

So what's new? IRLP and EchoLink have been around for some time. Significant changes in the security of EchoLink and the methods of authenticating licensed amateurs for access to the system mean that it is now a "closed" network that is not accessible to the public. This in turn means that it can be connected to amateur repeaters and simplex nodes in Australia.

The other change has been some tricky software written by Tony VK3JED that connects VK3RMH to both systems. Radio users can establish links to either IRLP or EchoLink nodes through the use of a DTMF keypad.

The result is that you may now have QSO's with either regular repeater users, or via connections with other repeaters, or with people sitting at the computer in their home or workplace.

Using EchoLink and IRLP: Users of either system should be careful not to cause emissions on frequencies they are not licensed for in the countries they connect to. You should check the node list for the output frequencies of remote simplex and repeater transmitters, especially if you are a novice licensee.

From our end, you can send DTMF tones to our repeater to activate EchoLink connections. Just enter the star (*) key followed by the 5-digit node number. VK3RMH is node number 140587. As with IRLP, send '73' to close the link (**note this only works when the repeater is idle - you may have to wait for a break in the QSO!**) or send a single '#' to hear the link status.

IRLP nodes can be linked using the standard 4-digit node number (without the extra 1's or 0's used in the old system!). Disconnect with '73'. RMH is node 6350.

Both systems acknowledge new connections with voice announcements. If you don't hear them then you probably aren't getting into the repeater well enough or have a faulty DTMF keypad. Make sure you hold the PTT button down for a second or two before talking and wait a second before releasing the PTT at the end of the over. Otherwise the start and end of your over will be cut off at the far end - there is still a significant delay across the Internet.

As with all voice-over-Internet systems, the audio is often distorted and sometimes hangs or repeats (hence the name "echo" link ???). This occurs because the speech signal is highly compressed and encoded for a very low data rate. Odd things happen to the decoded speech signal whenever some of the data goes missing or arrives late across the Internet, in much the same way as a bad mobile phone connection. You will often hear these effects on the repeater, but there is not much we can do about it. The problem is usually to do with low speed (modem) connections at the far end and service providers that throttle their data rates.

For details on setting up a EchoLink PC check for instructions and software that can be downloaded from at www.echolink.org

73's, Mark VK3BYY

UWB - ULTRA WIDE BAND

Hot on the heels of current interfering devices like LIPD's and Powerline Communications (PLC) devices come another technology called Ultra Wide Band (UWB) to increase the noise on our amateur bands.

This is another crazy idea for short-range communications between consumer devices. It's intended for moving 100's of megabits per second over very short distances (10m). UWB is being developed by a consortium of giant computer and communications companies as a replacement for slower BlueTooth, 802.11, and other short range data links.

UWB is also being used in vehicle collision avoidance radars, but at much higher frequencies, although that is not such a problem.

Ultra Wide Band is defined as radio transmissions with bandwidths greater than 25% of the centre frequency. In this case we are talking about emissions that spread right across the band from 2.4 to 5GHz. UWB is a carrier-less system, transmitting extremely narrow Gaussian shaped pulses of about 500 picosecond duration, at rates of up to 40 million pulses per second. It's like a spark transmitter on steroids!

The idea is to spread the signal simultaneously across several GHz of the frequency band. In theory it is sent at a power level such that when smeared across such a wide band it won't interfere with existing narrow band users. The advantage of the system is that the effective transmitter power seen in any narrow frequency band is so low it doesn't need licensing.

A matching broadband receiver is used to gather up all the harmonics produced by the narrow transmitted pulse and are recovered using correlation techniques. Because there is no carrier, pulse amplitude, pulse position, and other pulse modulation schemes are used.

Early proposals were to centre the wide band system on 1296MHz - not a popular proposal with amateurs! Tests involving the ARRL found that UWB devices can cause a significant rise in effective background noise level, even on narrow band SSB signals. This is mostly due to the UWB pulses overloading receiver front ends. Although the average power is very low, the narrow pulses have a high peak power that can saturate receiver front ends and mixers.

Fortunately the scheme struck trouble with the FCC a while ago when it was found UWB could interfere with GPS receivers. The FCC now restricts UWB to frequencies above 3.1GHz, which means it may still interfere with our 9cm and 6cm amateur bands. The UWB workgroup has proposed to filter out emissions around the 5GHz "free band" users (such as 802.11a data systems) to avoid interference.

Interestingly, UWB has quite different requirements for antennas. They must cover a very broad frequency range - up to an octave wide. This rules out most high gain antennas such as Log-Periodics as they are unsuitable for narrow pulses. Travelling wave antennas fair better, with simple antenna like the Diamond dipole working much better than complex antenna

Apart from a seemingly blatant disregard for the radio spectrum, UWB has many advantages, including its high speed, robustness to multipath fading, and security. It's likely we'll see a lot more about UWB in the future and can only hope they keep the noise down!

Mark VK3BYY

MOTOROLA SPLITS AGAIN

Motorola will be a name familiar with anyone in the two-way radio industry and to amateur radio home-brewers. In recent times they have also been a leader in mobile phone manufacturing.

This US semiconductor and electronics giant is set to spawn a new public company which will take over production of all of it's semiconductor products. A few years ago Motorola spun it's smaller discrete semis, like transistors, linear and digital logic components off into a company named ON Semiconductor. The latest move will see all Motorola RF transistors, PA modules, microprocessors, DSP, and RF LSI chips move to a new company (yet to be named).

POWER LINE COMMUNICATIONS

Powerlines Communications (PLC) are in the news again. However this time it is good news. Commercial broadcasters have come out in support of banning PLC in Australia. The broadcasters, as well as many other HF users such as amateurs and the flying doctor service are concerned that PLC could interfere with reception in weak signal areas. This is good news for us as it adds some muscle behind our arguments for banning PLC in Australia.

See more at the [WIA Vic news web site](#).

SPECIAL EVENT STATION

The special event station **VI3ARDF** will operate for the duration of the ARDF Region 3 championships between 28th Nov to 3rd Dec from Ballarat. Listen out on 20, 15 and 10 meters during the event. The station will be set up and managed by the Ballarat Amateur Radio Group. As well as a DX station, they will also provide communications for competitors back to their home countries such as Mongolia and Kazakhstan.



A special QSL card will be available to celebrate the event. Full QSL route details will be available from QRZ.com by the time the station becomes operational.

2003 EVENTS

- Nov 9th** ARDF event, Brimbank park, 2 & 80m Combined with orienteering Metro event.
 - Nov 13th** NERG Meeting - Ionospheric Prediction Graphs for better DX'ing by Jim VK3DBQ
 - Nov 28th** NERG Tuesday morning tea group Contact Jim VK3DBQ for location.
 - Nov 28-Dec 3** The 5th IARU Region 3 ARDF Championships Mt Helen Campus, Victoria University, Ballarat. Info: www.ardf.org.au (2m event 30th Nov, 80m event 2nd Dec.)
 - Dec 6-7** ZL VHF Field Day - 1600 to 2200 on the Saturday, and 0800 to 1400 on the Sunday, NZT or NZDT
 - Dec 11th** NERG Christmas BBQ
 - Dec 26-Jan 18** Ross Hull Memorial VHF/UHF Contest
- Collected from AR magazine, WIA Vic, Vic ARDF Group*

LAST CALL FOR VOLUNTEERS

Are you interested in spending a day or two out in Victoria's premier tourist region? Out in the fresh air amongst the gum trees? Or perhaps an entertaining indoor banquet with is more your style?

In return for a few days help we are offering you a chance to enjoy these activities in a friendly atmosphere, with the chance of meeting people with a common interest in amateur radio. We have great rates on accommodation. You get a free T-shirt and loads of other benefits. We can probably even arrange transport to and from Ballarat.

Can you tell we are desperate for volunteers?

And since we are desperate for runners (and walkers), we'll even give you a loan of a sniffer, compass, and map so you can to join the Australian team (you must be a WIA member though).

By now you will realise we are talking about the 5th ARDF Championships for Region 3 of the IARU, to be held in Ballarat in just a few weeks time !

Running 29 Nov to 3 Dec, the big competition days are Sunday 30 Nov and Tuesday 2 Dec. Activities are based at the Mt Helen University campus, with the actual ARDF events being held several kilometres away in bushland, parks, and forests.

Contact the Victorian ARDF Group for further information by one of these methods:

Web Site: www.ardf.org.au

Email: brucep@netspace.net.au

Phone: Bruce Paterson 0407 655 399

Here is a sample of the programme:

- Friday 28th** - Registration, Team and Jury meetings. Volunteers for registration, setup, greet overseas teams and direct to shuttle bus at Tullamarine.
- Saturday 29th** - Equipment tests, Model ARDF event, Orienteering Street-O event. Volunteers needed to set out transmitters, help run the Orienteering event, etc.
- Sunday 30th** - 2 meter ARDF championship event
Volunteers to setup start and finish areas, direct competitors, place transmitters on course, supervise transmitters, transport, scoring, crowd control. Videotape event.
- Monday 1st** - Tour day - competitors visit Ballarat's tourist spots including Sovereign Hill and the Wildlife park. BBQ lunch.
- Tuesday 2nd** - 80 meter ARDF championship event; Awards Ceremony; Gift exchange, Banquet Dinner. Requirements as for Sunday - Volunteers to run ARDF event. Also Banquet setup, PA system, Video cameramen.
- Wednesday 3rd** - Departure day. Packup and go home.

TINY CAMERAS:

Digital cameras are turning up all over the place. Some of the new mobile phones come equipped with quite capable 2 million pixel digital still and motion cameras built-in.

They are so good in fact that the sales of camera equipped phones was exceeding the sales of digital cameras last quarter.

Youths in Japans are buying camera equipped mobile phones as fast as they are produced, often unsubscribing from the communications carriers as soon as they are purchased. Buying a phone as a camera has several advantages - they are cheap due to the heavy subsidising by the telco, and they often have advanced features built-in you don't find in regular digital cameras such as such as organisers, games, and MP-3 players.



But that's not all....

Cameras are being built into USB memory sticks - those key sized tags you can hang on your key ring and use to transfer ten's of megabytes of files from one computer to another. So now the stick camera can be used as a still camera or even as a USB web cam. Simply plug into a USB port to download the pictures and recharge the battery!

But there is more!....

Mobile phone makers have developed a phone with a built in TV tuner, so you can watch TV when you've run out of people to phone and got bored with the phone's built in games....

And then some!...

Sanyo is about to release the smallest digital video camera to date. Not much larger than a "clam" phone, it can record 30 minutes of video onto a 512MB memory card. It features a 3.2 million pixel CCD, a x5.8 zoom lens, and can record at 30fps at VGA resolution using MPEG4 and JPEG. Sanyo claim this is the first movie camera in the world that can capture a 3.2 million pixel image while recording in real time video.

I guess it won't be long before we have a Swiss army knife that incorporates a mobile phones, a FAX, a camera, TV, video player, Play Station, Microwave oven and coffee warmer. Camping out in the wilderness will never be he same.

By Mark VK3BYY

WILL THE REAL BNC STAND UP?

Most amateurs will have come across the dependable BNC connector - it's the most commonly found connector on test equipment and is often used as the antenna connectors on commercial VHF and UHF radios. Until recently most amateur handhelds used BNC connectors for the antenna socket.



BNC plug and socket

Have you ever wondered what the letters BNC stand for - Baby N-Connector perhaps? Here is what the publicly generated Internet encyclopaedia, Wikipedia, has to say about the BNC:

BNC connector:

The Bayonet Neill-Concelman (sometimes wrongly called the British Naval Connector) is a type of RF connector used for terminating coax cable. Some authorities expand the abbreviation as Baby Neill-Concelman - it is a lot smaller than N and C connectors. The BNC connector is one of a larger class of "bayonet connectors", named after the resemblance to the standard twist-on attachment for a bayonet. Named after Paul Neill of Bell Labs (inventor of the N connector) and Amphenol engineer Carl Concelman (inventor of the C-connector), the BNC was originally designed as a miniature form of the Type C connector.

It is commonly used on thin Ethernet networks, both on cable interconnections and network cards.



TNC plug and socket

A threaded version of the BNC connector, known as the TNC connector (for Threaded Neill-Concelman) is also available. It has superior performance to the BNC connector at microwave frequencies.

<http://www.wikipedia.org/wiki/BNC>



The Neill connector - big brother of the BNC and TNC connectors

Photos by Mark, VK3BYY

JOTA 2003 REPORT - NERGS HELP OUT AT NARBETHONG

JOTA 2003 was held once again at the Black Spur Riding School at Narbethong operating under our club call of VK3CNE. VK3XXX Mark 3, VK3HFT Andrew and VK3LI Mark-2 were there to brave the elements and scouts. Weather on Saturday was superb. Andrew and Mark 3 arrived mid-morning on Saturday to set up a wire HF and 6-meter vertical antennas. Their "radio shack" was located on the veranda of the farmhouse and what a view they had of the countryside. Mark 3 at one stage modified his antenna by including the property wire fence. Not sure how many contact he got on that antenna!!



**Garry Cruddas & Craig Hannaford
1st Healesville group**



Lisa & Terry from the riding school where JOTA was held



**Heather(1st Healesville),
Brad McKay(1st Mooroolbark),
with Amateur-in-charge Mark VK3LI**

Mark 2 had arrived earlier that morning and had set up his trusty old 80/40/20 meter inverted V dipole from a common feed point with the help from one of the Ventures - thanks Brad for the help. Andrew had given Mark 2 a 6meter vertical to place on top of the Clark Mast that the dipole array was placed on. Mark 2's radio shack was the cabin. He had no complaints as he had his own on-suite toilet/shower and bunk beds as well. Story goes that Mark 2 did not need the bunk bed to fall sleep, any chair would do.

The scouts and cubs started using the radio about lunch time on Saturday and was a consistent flow of kids right through to about 10 that evening. Mark 3 and Andrew by then had bought their radio shack into the cabin by late afternoon, so we had two operating stations happening in the one room and his wife had dropped in to see how we were going. I am sure John was impressed by the way it was all happening. John spent a good while chatting to Rob Lowe who was running the JOTI (Jamboree Of The Internet) with a number of computers set up for the scouts and cubs to use. Rob's son Chris did an admirable job keeping the connections to the Internet alive and buzzing.

As per tradition, Saturday night VK3LI with the help of VK3XXX ran the fireworks display (legally). Mark 3 had put together a spectacular fireworks piece for the end of the display and was well received by all watching. Rumour has it that Mark 3 had a close encounter of the pyrotechnic kind, what about it Mark?

Many good contacts were made over the weekend, mainly VK stations which is easy for the young operators to listen to. During the evening Mark 3 had some great overseas contacts. Guess QSL cards may be heading his way.

Sunday morning the radios were back on air with a few keen new operators coming back for more contacts. The weather outside by then was looking very dark. By about 10am the rain started and it poured down. We decided by lunchtime to call it off and start the unpleasant job of packing antennas up in the rain.

More than 60 scouts, cubs and leaders were at the camp this year. Numbers down to what was expected but fun had by all. This is the last year JOTA is held at the Black Spur Riding School as the farm is to be sold



Chris kept the computers running and the internet links alive during JOTI

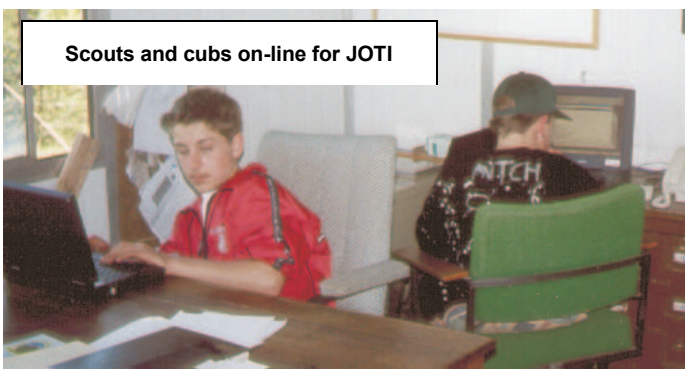
and the Riding School leases the land from the current owners. I am sure JOTA 2004 will be organised by the Mooroolbark Cub group next year and hope to see a better turn up from the NERG's.

Maybe with some directional finding activities (hint) ?

Cheers from Mark VK3LI



**Rob Lowe - leader
1st Mooroolbark
and JOTI organiser**



Scouts and cubs on-line for JOTI



**Andrew VK3HFT and
Mark VK3XXX operating
from the veranda**

The NERG Inc. Reg No A0006776V <http://nerg.asn.au>

The North Eastern Radio Group, Inc. is an amateur radio club devoted to encouraging members and others to enjoy the hobby of amateur radio. It tries not to hang on ceremony and endless reporting but rather participate in the fun aspects of this fascinating hobby.

Membership Fees (due each August):

Full: \$30 Family: \$40 Concession: \$20

Send to: NERG Treasurer, PO box 270, Greensborough, Vic., 3088

Committee

President	Greg Williams	VK3VT	9432 0563
Secretary	Mark Beacham	VK3XXX	0417-597399
Treasurer	Marg Baxter	VK3VOJ	9467 1253
Committee	Betsy King	VK3HBK	
	Peter Cosway	VK3DU	9379 3626
	John Weir	VK3ZRV	
Social Sec.	Don Haslam	VK3KDT	0409 024597
Repeaters	Mark Harrison	VK3BYY	9435 3043

Meetings

2nd Thursday of each month at 7.45 PM (excepting Dec. & Jan.)
Briar Hill Primary School, Gladstone Rd, Briar Hill (off Sherbourne)
(Melway map ref 21-B1)

Classes

NERG occasionally runs classes and exams for Amateur license candidates.

Callsigns and Repeaters (25km North East of Melbourne)

Club call - VK3CNE <http://www.qsl.net/vk3cne>

6m rpt VK3RMH FM 52.550 MHz in 53.550 MHz out

70cm rpt VK3RMH FM 433.325 MHz in 438.325 MHz out

IRLP node 6350, EchoLink node 140587

6m beacon VK3RMH CW 10 Watts 50.295 MHz – Intermittent

10m bec'n VK3RMH CW 20Watts 28.2565 MHz

Occasionally home to the Scout Radio & Electronics Group repeater:

2m VK3RSR FM 146.375 MHz in 146.975 MHz out

NETS

NERG NETS run on 146.575 MHz FM Simplex (8.30 – 9.30 pm Thursdays).

Please join the discussions. NERGs often monitor this frequency and the 70cm VK3RMH repeater.

WEB Sites: <http://nerg.asn.au> and <http://www.qsl.net/vk3rmh>

NERG NEWS submissions and comments invited:

editor: Mark Harrison VK3BYY

ph: 9435-3043 hm (between 7.30-9.30 p.m. please)

post: 266 Nell Street West, Watsonia, 3087

email: vk3byy@nerg.asn.au



NERG

North – East Radio Group VK3CNE
Incorporated 1985
BOX 270 GREENSBOROUGH VIC 3088

NERG MEETING - at the BRIAR HILL PRIMARY SCHOOL !

7:30 PM Thursday 13th November 2003

This Month – IPS DX prediction and Electronic QSL services by Jim Baxter VK3DBQ

2003 CALENDAR (NERG ACTIVITIES IN BOLD)

Nov 9 th	ARDF event, Brimbank Park, Keilor, 10:30am - 1:00pm 2 & 80m combined with orienteering Metro event.
Nov 13 th	NERG Meeting - Ionospheric Prediction Charts and E-QSLs for better DX'ing by Jim VK3DBQ
Nov 28 - Dec 3	5th IARU Region3 ARDF Championships - Ballarat (2m event Sunday 30th Nov, 80m event Tuesday 2nd Dec.)
Dec 11 th	NERG Christmas BBQ