



NOVEMBER 2007

NERG Inc.
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WHAT'S ON IN NOVEMBER

This month the NERG meeting will be a mystery night - you'll have to come along and see what's on!

Please be aware that the NERG end-of-year BBQ normally takes place in December, so there won't be a regular meeting at the hall. Also we usually skip the January meeting with everyone recovering from the festive season.

73, Mark Harrison, VK3BYY, NERG NEWS Editor

NEXT MEETING: The following regular meeting is scheduled for Thursday 14th February 2007, starting 7:45pm at the Briar Hill Community Hall, 126 Mountain View Rd, Briar Hill, Melways 21 C3.

THE WANSARC-NERG GATHERING

NERG and our friends at WANSARC (Western and Northern Suburbs Amateur Radio Club) got together last month for a mini-hamfest/social night.

Around 30 amateurs met at the NERG hall for an evening of browsing the new and pre-loved items tables along with a lot of discussion on all manner of subjects.



Graham from G&C Communications was in attendance with a table loaded up with radios and accessories at very inviting prices. If you missed the bargains, G&C will happily take phone orders and deliver items direct to your door.

The NERG appeal

NERG is seeking donations to establish an Amateur Radio Communications and Training centre. The centre's aim is to provide courses that will provide complete training in Radio and Electronics to all interested people. Age is no barrier; we train prospective Amateurs from school age through to folk in their 80's, with retirees often seeking involvement in a community based hobby. Funds will be used to purchase teaching aids and radio equipment used in the classes.

Banyule Gives is a service that manages the donation process for community groups in the Banyule Council region. See more at: <http://www.ourcommunity.com.au/banyulegives/nerg>

NERG NEWS

Incorporated 1985 in Victoria, Australia
Reg No A0006776V - <http://nerg.asn.au>
Affiliated with the Wireless Institute of Australia

**NOVEMBER 2007
NEXT MEETING
7:45PM Thursday 8th
November
Mystery night**

?

**The next Coffee Shop night:
Thursday 25th Nov.**

In the spirit of co-operation between the two clubs, WANSARC President Graeme VK3NE presented a new radio-microphone receiver to NERG secretary John VK3ZRV. The TOA FM Diversity Receiver receives signals without fading from an FM microphone, and is ideal with a PA system for group presentations. NERG will certainly put the FM receiver to good use, especially with the rising incidence of hearing loss in the general community.



Graeme VK3NE from WANSARC presents Mark VK3BYY and John VK3ZRV with a diversity FM microphone receiver.

COFFEE SHOP NIGHTS

Last month we took expanded the coffee shop night into the much larger NERG-WANSARC gathering (report later).

This month we'll be back to normal with nothing specific planned, although I will bring along a \$39 DVB television set top box and briefly attempt to explain how it performs some of its magic. We may also get a chance to press all the buttons on some of our member's recently acquired D-STAR radios.

The next coffee shop night will be held at the NERG hall at 8pm on November 22nd.

DÈJÀ VU – THE OCTOBER MEETING



Drew Diamond VK3XU was our guest speaker at the October NERG meeting and put on a great talk. He covered many interesting subjects including balanced antenna tuners, class-E transmitters, and paddy board construction techniques.

It's hard to do justice to any of these subjects in a short summary here. Fortunately Drew has published many articles in the WIA's Amateur Radio magazine, and compiled three volumes of his "Radio Projects for Amateurs" books (available from the WIA bookshop and some ham radio suppliers). A long list of Drew's articles appears in the CW Operator's QRP Club newsletter found at:

<http://www.users.on.net/~zietz/qrp/info.pdf>



Drew explained why a balanced antenna tuner is desirable in certain cases and why the more popular unbalanced tuners have limitations when feeding a balanced antenna via a balun. He also described how to build a balanced tuner from readily available components.

The "Paddy board" construction method is frequently used in Drew's projects. It makes the building of homebrew projects simple, quick and cheap. The technique uses small squares of copper clad circuit board that have slots cut into them to form a grid of "pads" onto which components can be soldered. These "modules" can then be glued directly to a chassis and linked together to form complete circuits. The slots can be easily cut with a small saw and a mitre box. Standard DIL integrated circuits can be mounted by cutting slots in the copper at various angles forming triangular shaped pads.

Drew says the technique has many advantages over printed circuit boards. For starters you don't have to remove a PCB

from the cabinet to work on the circuit since all circuitry is accessible from the top and can be debugged and modified easily. It's also easy to add additional circuits.



This E-Class AM transmitter is a good example of Paddy Board construction.

Class-E transmitters were discussed with Drew pointing out their advantages for AM and CW. Some of the mystery surrounding this mode was explained

NERG thanks Drew for his presentation and all the bits of free circuit board and Perspex that people could take away and start building with.

2008 WIA CALLBOOKS DELAYED

The WIA 2008 Australian Callbook is now likely to be available in mid-November following delays in production.

Send your orders to contact nerg.asn.au or see John VK3ZR

ERRATA

All occurrences of "class-E" mentioned in last month's newsletter somehow turned into class-D type transmitters.

Class-E is a highly efficient amplifier mode where the output device is either ON or OFF, with the transistor spending very little time in the "resistive" region.

While the transistors in a Class-D also switch between hard ON and hard OFF states, they do so at a much higher frequency than the output frequency and are Pulse Width or Pulse Density modulated (or more recently Sigma-Delta modulated).

See Wikipedia's entry on amplifiers for far better descriptions of all the amplifier classes right up to class-H, at:

http://en.wikipedia.org/wiki/Electronic_amplifier

WEB OF THE MONTH

As I mentioned last month, there are several homebrew projects on the Internet for those wishing to experiment with amateur digital voice communications. Wikipedia has a good summary on the subject of D-STAR at:

<http://en.wikipedia.org/wiki/D-STAR>

Many projects use voice codec chips made by DVS Inc including the AMBE-2020 chip (readily available from DVS Inc for around \$20US each). However beware that not all projects containing the AMBE chip are compatible with D-STAR. Many of the older projects aren't compatible.

Moe Wheatley, AE4JY, has published designs for an experimental, almost D-STAR compatible, VHF radio. He is working on a USB 'dongle' containing an AMBE2020 to interface a PC to amateur transceivers. See more at:

<http://www.moetronix.com/dstar/>

ARRL have the D-STAR standard (also the only D-STAR document in English that could be found on the JARL site):

www.arrl.org/FandES/field/regulations/techchar/D-STAR.pdf

THE GAINFULLY UNEMPLOYED GROUP

The October get together was held Tuesday, 23 October, at the home of Jim VK3KE.

Those present were Greg VK3VT and XYL Denise, John VK3ZRV, Gerhard VK3EWM, Ian VK3XIJ, George VK3MKK, Ernie VK3FM, Dave VK3JMB, and pleasant hosts Jim VK3KE and Margie VK3VOJ – we also enjoyed the presence of junior members James and Cadence for part of the day.

As is usual for these days, the table was excellent, and no one had any excuse for leaving in any condition other than pleasantly comfortable (full, even), and discussion again was of a varied, and sometimes surprising, nature.

Indeed one of the topics covered was of one of the members present, George VK3MKK. After some animated discussion, it was declared that no credit would be given for this day's eyeball with George towards the "worked George" contest and any bottles of wine whatsoever!

Thanks go to Jim and Margie for their hospitality, and we all look forward to the final get together of the year, at the home of Greg VK3VT, on Tuesday, 27 November.

As is usual, everyone is invited, and given it is the last for the year, Greg looks forward to a 'bumper' turn-up.

All NERGS are very welcome but let Greg know beforehand.

Regards – Ernie Walls VK3FM

vk3fm @ wallsy. com. au

Listen out on the NERG chat channel of 146.575 MHz during the day for directions and for the latest rare DX spots.

MELBOURNE RALLY



The Wireless Institute Civil Emergency Network is providing communications support for the Rally of Melbourne over the **10/11 November 2007 weekend**. The rally takes place in the Narbethong area. 6 meters will be used along with the usual 2m and HF bands if required and packet radio. Contact me if anyone would like to attend.

Saturday & Sunday 24/25 Nov 2007: Alpine Rally North of Bairnsdale in Gippsland area. Voice on 2mtrs, 70cm, and Packet. Any one interested to contact me for details.

For further details contact John Weir VK3ZRV on 9431 0667

WERE IS GEORGE AWARD

The competition for some fine wine continues this month with Peter VK3TBN still offering the "Worked George" certificate to anyone that holds a two way QSO with George VK3MKK.



Last month Betsy VK3HBK scored a couple of bottles of wine as the person to contact George VK3MKK most often during October. Several other members picked up their certificates confirming contacts with George.

JOTA 2007

The airwaves were busy again for this year's Jamboree On The Air. John VK3ZRV and Don VK3KDT set up the NERG station at the hall on Saturday afternoon for the Mannagum Rovers group. Contacts were mainly with cubs stationed at a weekend camp at Plenty with the station there run by Peter VK3TBN.

The NERG IRLP repeater was kept busy by various local JOTA stations contacting overseas JOTA groups.

The Mannagum rover group has about 12 members from the Hurstbridge, Wattle Glen and Diamond Creek areas. The group of 17-26 year olds are involved in all aspects of scouting and community work. They meet at the Hurstbridge Hall on Wednesdays at 19:30 hrs. Contact Alistair 0404 678 439.



SPRING VHF - UHF FIELD DAY 2007

November 17-18 2007

There are actually two VHF-UHF Field Days, both WIA sponsored. The first one was run as a trial in January 1989 or 1990 (I forget which). It was quite well received so it has continued since then. After a few years it looked like there would be enough support for another one in spring, so now we have two per year - the Spring Field Day (normally in the first weekend in November) and the Summer Field Day in mid-January.

The rules for the two are identical. All entrants receive a colour certificate in the mail. Unlike the Ross Hull Contest, which is a fairly serious DX contest, the aim of the field days is mainly to encourage more activity on VHF and microwave bands, to encourage people to work greater distances than usual by operating portable, and to provide opportunities for people to activate or work into new grid squares. I suppose the Spring Field Day also serves the purpose of stirring up activity after the winter "hibernation" and providing an opportunity to get the gear and antennas ready for the summer DX season.

There are no mode restrictions except that repeater and satellite contacts are not allowed. There is some FM activity but most of the action is on SSB. There is some difference in support, with most club stations usually preferring the January field day over the November one. Single operator stations support both of them about equally. In the single operator categories, the 6 hour section has become more popular than the 24 hour section over the last few years.

It is possible to do quite well with only modest antennas if you pick a good hilltop. Another option if your station is easily transportable is to operate from more than one grid square during the contest period. On the other hand people with big antennas and/or gear for many bands usually prefer to stay in one spot and depend more on the extra bands or bigger antennas for their scores.

For the Rules -see the WIA web site and look under "Contests"

John VK3KWA, WIA Contest Manager via WIA NEWS

MELBOURNE D-STAR REPEATER NOW OPERATIONAL

The new Melbourne D-Star repeater VK3RWN located at Olinda in the Dandenong ranges was installed recently.

VK3RWN is now running in a testing / commissioning mode on 2mtrs & 70cm. Some great photos of the very professional looking ICOM repeater system and the installation team can be found on the WIA web site.

Port Band	Input	Output	Split
C	2m 146.3125 MHz	146.9125 MHz	-600kHz
B	70cm 432.900 MHz	438.300 MHz	-5.4MHz
A	23cm 1.2939 GHz	1.2739 GHz	+20 MHz
AD	23cm 1.2983 GHz	same	Wideband Data

The following news comes from WIA news:

The system is running on temporary antennas so coverage may be reduced, especially on 70cm.

Antennas and coax for the 23cm DD (digital data) & DV (digital voice) will be installed in the next few weeks at the same time the 2mtr and 70cm antennas will be upgraded.

Once the coax and antennas are installed we will begin testing 23cm DD, however we are waiting on cavities for 23cm DV, so it may be a while before the 23cm DV is operational.

The D-Star Gateway Server & Network connection to the International D-Star network have been installed but are yet to be activated for testing / commissioning.

You are welcome to use the repeater, however keep in mind that the system will be unavailable for periods of time while we work through the commissioning phase.

I would like to thank all those in the D-Star installation team, Steve VK3JSR, Allan VK3FALL, Peter VK3TQ, Matt VK3FGIB, Robert VK3KRB, Richard VK3JFK and Cameron VK3MIR for their help in organising and installing the new D-Star repeater VK3RWN. Some members of the team worked well into the night and did not get home until 2:30AM Saturday.

Thank you also to the D-Star Team sponsors, ICOM, aaRadio, JRD Communications, RFI Industries, Strictly Ham, G&C Communications and the WIA for their support with this project.

Regards, Richard VK3JFK

Australian National D-Star Coordinator

From WIA NEWS www.wia.org.au

Want to see who is using D-STAR on VK3RWN?

Check out this web site:

<http://www.jfindu.net/dstarlh.aspx?rptr=VK3RWN>

ACMA RULES OUT D-STAR FOR FOUNDATION LICENSEES

Unfortunately Foundation Operators will not be able to use D-STAR for either voice or data communications.

The WIA sought clarification from the ACMA, requesting a number of changes to the Foundation conditions that would allow voice communications using D-STAR radios and repeaters.

The WIA proposed the addition of an appropriate emission mode designator for Foundation licensees in the 144 to 148 MHz and 430 to 450 MHz bands, with the additional provision in paragraph 29 of the LCD to permit, if the emission mode was digital voice, any data necessary to enable the use of the voice mode.

ACMA has now responded to the WIA's approach, rejecting the proposal.

ACMA argues that the entry-level licence is meant to be easy to obtain, the amendment proposed to permit digital voice mode "would require expansion of the current syllabus and add a level of complexity to the qualification."

ACMA also contends that adding digital voice modes would erode the difference between the Foundation and the other higher levels of licence, and that the digital voice mode would require the transmission of digital data, incompatible with the Foundation licence and finally, a further amendment as requested would create further delay in the implementation of the outcomes announced 2003.

The WIA is surprised by the response from ACMA.

Unfortunately, there will be no amendment at this time to Schedule 3A of the LCD to permit digital voice modes by Foundation licensees.

WIA NEWS www.wia.org.au

CANOE MARATHON RELIES ON AMATEUR RADIO



The Red Cross Murray River Canoe Marathon began in 1969 and is a five day 404km fundraising event involving hundreds registered paddlers from around the world.

It is also a major training exercise for WICEN (Vic) which provides safety and logistics communications both on the water and land.

This is the 39th year that WICEN has assisted the event and it requires more volunteers who can support it for a day or so, particularly early in the event that begins on 27 December at Yarrowonga and ends 31 December at Swan Hill.

It's calling for volunteers to be part of the team effort required and welcomes Foundation Licensees.

You don't have to be a member of WICEN to participate, but will be required to sign on as a Casual Member for insurance and other purposes.

To obtain more information please contact Bruce Bathols VK3UV by phone on 0418 386 030 or email vk3uv@wia.org.au

- Amateur Radio Victoria www.amateurradio.com.au

2007 AMATEUR RADIO EVENTS

NOVEMBER

17-18 Nov Spring VK-VHF/UHF field day (note new date!)

24/25 Nov Alpine Rally North of Bairnsdale in Gippsland area. WICEN providing comms.

26 Dec - 2008 Ross Hull Memorial Contest

DECEMBER

27-31 Dec. Red Cross Canoe Marathon - Communications support by WICEN - volunteers required. Starts at Yarrowonga and ends at Swan Hill.

FEBRUARY 2008

Feb 10 Kyneton Hamfest by Amateur Radio Victoria, Central Goldfields ARC and Midland ARC.

NOTE: please confirm details closer to the posted dates!

UTC dates may be used for International events.

Gathered from AR Vic, WIA, ARRL, various clubs, and the VK Contest Club (www.vkcc.com)

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We just want to be the best for our local community*



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www.margheritas.com.au

2007/8 ARDF/FOXHUNT CALENDAR

Events from the ARDF web site – check for updates and further details at www.ardf.org.au and www.melbfox.com.au

- FoxHunt = Friday night or weekend daylight mobile hunt.
- RadiO = a simplified direction finding competition usually held at an orienteering event.
- Bush = Bush orienteering event.
- Inter = International event.

Type	Date	Event	Map
Street	Mon, 5 November	Southern Summer Series - Waterford Valley	73 G10
RadiO	Sun, 11 November	Emerald - RadiO	70 G10
FoxHunt	Fri, 16 November	Foxhunt	
FoxHunt	Fri, 14 December	Foxhunt	
Street	Wed, 2 January	Eastern Summer Series - Park Orchards	35 E9
Street	Wed, 12 March	Eastern Summer Series - Greythorn	47 B4
Inter	Tue, 2 September	World ARDF Championships 2008	

The NERG Inc. RegNo 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 in 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	John Weir	VK3ZRV	9431 0667
Treasurer	Marg Baxter	VK3VOJ	9467 1253
Committee	Betsy King	VK3HBK	
	David Aston	VK3THY	
	Peter Cosway	VK3DU	9379 3626
	Don Haslam	VK3KDT	0409 024 597
	Ernie Walls	VK3FM	
Repeaters	Mark Harrison	VK3BYY	9435 3043

Meetings

Main Meeting: 2nd Thursday of each month at 7.45 PM (ex Dec & Jan)

Coffee Shop nights: 4th Tuesday each month.

Briar Hill Community Hall, 126 Mountain View Road, Briar Hill
(Near Sherbourne Road intersection) Melway map ref 21-C3

Classes & Exams

NERG occasionally runs classes and exams for Amateur licences

Callsigns and Repeaters (25km North East of Melbourne)

Club call - VK3CNE <http://www.nerg.asn.au/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 H 50.2950 MHz

10m bec'n VK3RMH CW 20 Watts V 28.2565 MHz

Packet Radio VK3CNE 2m 144.700 MHz, 1200 bps

VK3CNE-1 for mail etc; VK3CNE-7 for the DX Cluster.

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. Also used as a general Net frequency.

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

NERG NEWS submissions and comments invited:

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NERG

North-East Radio Group VK3CNE

NERG Incorporated 1985
BOX 270 GREENSBOROUGH VIC 3088

STAMP

NEXT MEETING:
7:45pm Thursday 8th November 2007
NERG meeting

2007 CALENDAR (NERG ACTIVITIES IN BOLD TYPE)

Nov. 4	Ballarat Hamvention, Sunday.
Nov. 8	NERG Meeting at the Hall.
Nov. 15	NERG Net - 8:30pm 146.575 MHz FM
Nov. 17-18	Spring VHF/UHF Field Day (WIA)
Nov. 22	NERG Coffee Shop night
Nov. 27	Morning Tea Group - last for the year at Greg VK3VT's QTH.
Nov. 29	NERG Net - 8:30pm 146.575 MHz FM
December 6	NERG Net - 8:30pm 146.575 MHz FM
Dec. 13	NERG end of year BBQ
Dec. 20	NERG Net - 8:30pm 146.575 MHz FM
January 2008	No meetings in January
February 14	First NERG Meeting for 2008