



June 2003

NERG Inc.
PO Box 270
Greensborough
Victoria 3088

JUNE MEETING

This week we have David talking about Outside Broadcast Vans, or more specifically, the new technology that goes into those multi-million dollar vehicles that are used to televise digital television from sports events, etc.

Usual tea, coffee and good chin-wagging to follow.

This will be the last meeting at this venue (see stop press below!!)
See you at the NERG meeting 7.45pm Thursday, 12th June, GreenHills Community House, Yandell Reserve, Greensborough.

FORTHCOMING EVENTS

Tuesday Morning Tea Group

A really great time was had by Mark VK3XXX, Steve VK3JSE, Ian VK3BGE, Dave VK3JMB Alan VK3JPK and Jim VK3DBQ at the home of Gerhard VK3EWM on Tuesday the 27th May. We were very well feed as usual and conversation mostly stayed with radio and related matters.

The next NERG Gainfully Unemployed Meeting (NERG-GUM??) will be on 24th June at the QTH of Ian VK3BGE. 73, Jim VK3DBQ

--- STOP PRESS ---

NERG is on the move! - Meetings from July onwards will be held at the Briar Hill Primary School. Don, VK3KDT advises that the school has a spare room we can use and has plenty of scope to expand NERG activities beyond our current meeting and novice class nights. Stay tuned for more!

The school is located at Gladstone Rd (off Sherbourne Rd.), Briar Hill, Melway 21-B3, close to Greensborough Station & Buses

HINDSIGHT

The Annual NERG Dinner

The Di Riccardos restaurant in Lower Plenty was the venue for the NERG annual dinner last week. More than 30 NERGs and friends got together to enjoy gourmet pizza and pasta over their favourite drinks and a lot of talk.

First prize (two nice bottles of red) for the door prize went to Mark VK3LI and Janice. Second prize (another nice red) went to Chris VK3CKH.

Many thanks to Don, VK3KDT, for organising the night, and to the staff at Di Riccardos for a very successful night. By the way, a Di Riccardos have donated a dinner for two to be raffled at the NERG AGM in August.

The May Meeting

The NERG meeting on Thursday May 8th was well attended with 26 members and guests attending. This was more surprising seeing as the rooms beside us were holding "Full Body Massage" classes and "Meditation classes". Some members were seen contemplating attending the other venues.

NERG NEWS

Incorporated 1985 in Victoria
Reg No A0006776V - <http://nerg.asn.au>

7.45 pm, Thursday 12th June 2003

Guest Speaker: David Battle

New Technology for Outside Broadcast vehicles



The meeting opened with a brief summary of our results to date in finding a permanent home - stay tuned for some exciting news!

A welcome was extended to 4 new members Alan, Steve, Anthony and Sean and we wished them well for their upcoming studies and exams. All four come to the NERG with keen interest and a wish to participate that the NERG appreciates.

The speaker for the night was none other than our very own Stephen Warrillow VK3JNH who has recently returned from a 12-month tour of duty (medical) in the UK. Stephen told of his initial arrival in England, on how they were caught out by there actually being hot weather for which they had not packed then setting up house (and radio shack) in Canterbury. Next on the agenda he approached the English version of our own ACA requesting reciprocal licence recognition. He told us about the bureaucracy and the brick wall he encountered as they could not handle the issue of a reciprocal licence to an Australian with a "J" call as it was not in their little black book.

Steve overcame this by studying Morse and attaining an examination pass at 12 words a minute. This then fitted into their book, and he received the call sign M0CYT.

Stephen took us through a photo slide tour of England then an extensive travel around Europe with them travelling in a small motor home dubbed "The Noble Steed." To some it refreshed memories of the past when they were their and for others it was wonderful to see the sights through Stephens and his families eyes, not the glossy travelogue. Each Country held a special point of interest, be it for the sights, the people, food or as shown in one picture, a bag of Potato Chips about to burst due to their high altitude.

It was a wonderful presentation and we are fortunate to have him back with us again. The formal part of the Meeting was closed and all joined in for Tea Coffee and Biscuits.

From Don, VK3KDT

ARDF Calendar

The Victorian ARDF group has a full calendar for the remainder of 2003, culminating in the Region 3 Championships in Ballarat in November.

Competitors for an Australian team are desperately needed for the championships - **especially Juniors!** Most of the current Australian champions will be busy organising the event so it's likely that just about anyone that turns up will get a place on the Aussie team :-)

The next ARDF (Amateur Radio Direction Finding) event will be held at the Mt. Gambier Convention (South Australia) on **Saturday 7th June 2003**. Event 2 2:30pm-4:30pm, hunt on 80m(3.585MHz) or 2m(145.300MHz). Event will be conducted by Jack, VK3WWW

The next Melbourne ARDF event is at Watson's Glen, Kinglake National Park on **Saturday 28th June**. Starts 10:00am at Marshalls Rd (Melways 265-K0). Get there via St. Andrews.

Then another combined Metro/ARDF at Cardinia Reservoir, 10:00am **Sunday 13 July**, Melways 126 B11, take Cardinia Creek Road into Reservoir Park

If there is snow about on **Saturday 26 July**, then put on the snowshoes and try the SNOW ARDF at Lake Mountain.

If Saturday's snow ARDF is cancelled, an ARDF will be held at Toorourrong Reservoir on **Sunday 27 July** with the NE Metro group. Left from Kinglake/Yea Rd. About 4km from Whittlesea, 610 N11

Newcomers are always welcome. There will be some spare gear to borrow and hunters you can tag along with. To keep up to date, join the ARDF e-mail list in Melbourne, follow links from:

<http://www.nerg.asn.au/ARDFlist.htm>

The updated ARDF web site is now available at: www.ardf.org.au

73, Mark vk3byy

WANSARC Amateur TV

The Western And Northern Suburbs Amateur Radio Club is getting fired up on Amateur Television projects and has invited NERGs to join in. WANSARC are going to purchase converter kits in the next few weeks. Here is a good chance to collaborate with a neighbouring club and have a load of fun. If you are interested contact Mark VK3BYY at NERG or Mark VK3PI at WANSARC.

For the uninitiated, ATV is normally transmitted on the 70cm and 23cm bands. ATV can sometimes be received on a conventional TV receiver if it can be tuned low enough (down to 444MHz or channel 16 (approx) on the dial). Otherwise a simple receive converter can be used to receive ATV on a conventional TV set. There are two channels on 70cm - one for simplex and one for the Melbourne ATV repeater. Unless you have a clear line-of-site view of Mt. Dandenong then you will probably also need a high gain UHF beam.

ATV activity on 23cm uses FM modulation and will require a FM to AM converter. An old Analog Satellite Receiver 'Set Top Box' may do the trick (without the down converter - but don't forget to decouple the DC feed up the coax !!!)

CONTESTS

Re-submit your John Moyle FD Logs!!!

Eric Fittock VK4NEF, the John Moyle contest manager advises that he had a hard disk crash on his computer and has lost all electronically submitted logs for 2003.

Stations should re-submit logs by 23rd August via Email to:

esr@powerup.com.au or esr01@optusnet.com.au

NEWS CONTRIBUTORS AWARD

Only two issues to get your award winning story into NERG NEWS and become a contender for the annual NERG NEWS award. The award is given to the best contributor of articles and news over the past year. A vote will be taken at the AGM in August. The perpetual trophy is a framed original John Kolm cartoon.

Aerial Mast Heights

Last month's news on the great Banyule tower battle mentioned a height limit of 5 meters. This is incorrect. Rather than muck it up again, here is the relevant clause from the Building (Single Dwellings) Regulations, 2001:

4.31 Masts, poles etc.

The consent and report of the relevant council must be obtained to an application for a building permit to construct a mast, pole, aerial, antenna, chimney, flue, pipe or other service pipe which-

- (a) when attached to a building, exceeds a height of 3m above the highest point of the roof of the building; or
- (b) when not attached to a building, exceeds 8m above ground level.

ACA EMR REGULATIONS

The ACA has finally introduced its long awaited EMR safety regulations. The new regulations apply to most commercial and amateur radio stations and are now in force.

All amateurs should have received official notice regarding the new regulations. Unfortunately the notice can be easily misinterpreted. For instance, many amateur stations fall into "**Category Level 1**", which does not require you to maintain compliance records.

HOWEVER, you must still COMPLY with the EMR limits - a fact that is only mentioned at the bottom of page 3 !

Another incorrect rumour is that "the Public" doesn't include people on your private property. In fact it includes all people on public and private property, invited or not.

DON'T PANIC JUST YET!

In any case, you probably don't need to panic yet. For instance, a moonbounce station was recently tested and even though a Megawatt was being pumped into a large high gain dish antenna, the field strength was well under the limits (because the power was spread out over the wide aperture of the dish).

You only need to stay a few meters away from a low gain antenna running off a typical 100-Watt HF SSB station to be compliant. Even 400Watts PEP SSB at 30MHz into a 9dBi antenna means staying no more than 5 meters away from the antenna.

The stations that may have trouble will be those running the full legal limit FM or CW into high gain beams (greater than 9dBi) on bands above 10 MHz.

The other class of station that may strike trouble are those with antennas low to the ground (base fed verticals, mobiles, and radiating feed lines like the G5RV).

In any case you should look up the guidelines and perhaps make a few simple calculations to make certain your station is safe. You can get the 17 page document from an ACA office or from the ACA web site (www.aca.gov.au). The one you need is titled:

"Electromagnetic radiation exposure: assessment against ACA mandated limits: Amateur Radio"
(May 2002 edition)

It contains directions for assessing your station and includes many useful tables and worksheets to make the job easier.

Basically you just need to identify a few key features about your transmitters and antennas and plug the values into the work sheet. You can ignore subtleties like feed line loss, antenna efficiency and so on for the first calculation and only worry about them if you happen to be over the safe limit.

Why do we need EMR regs?

The ACA bases the EMR regulations on safety standards set by ARPANSA, Australia's governing body for all ionizing and non-ionizing radiations, and are designed to protect everyone from possible health risks and the other dangers of high EMR fields.

While there is still some argument about the effects of long term exposure to radio waves, the new rules are based on known safety limits which are generally related to either (i) heating of the body tissues, (ii) stimulation of nerves, or (iii) acoustic percepts produced by thermo-elastic effects.

In short, it is known that radio waves heat any conducting material, including people. The degree of heating is related to several factors including frequency, part of body, and of course the field strength. It has been determined heating by more than 1 degree (C) can cause health problems, and much higher field strengths can cause burning. The new standard sets the maximum temperature rise around 0.1 degree.

Also, nerves can be stimulated by low frequency RF fields from 3kHz to 10MHz, with consequences similar to electrocution.

Thermo acoustic effects produce auditory noises when exposed to very short RF pulses that have very high peak intensities (such as radar transmitters).

There are also safety limits set to avoid disrupting the operation of medical implants such as heart pacemakers.

The new safety levels have a large safety factor built in so that allowable power levels are well below that required to cause identifiable health problems.

73, Mark Harrison, VK3BY

HOW RADIO WAS CREATED

And God said...

$$\mathbf{F}^{\mu\nu}_{;\nu} = -4\pi/c\mathbf{J}^{\mu} \text{ and } \mathbf{F}_{\mu\nu;\lambda} + \mathbf{F}_{\nu\lambda;\mu} + \mathbf{F}_{\lambda\mu;\nu} = 0$$

and there was radio!

REPEATER LISTING UPDATE

Publishing delays and lack of communication between the states has led to a number of errors and omissions from the repeater list published in the latest WIA 2003 callbook.

Here are some recent updates:

2 meters:

146.725MHz VK3RYV Yarra Valley - New repeater hosted by the Healesville ARC.

147.125MHz VK2RER Bullock Hill NSW does not exist.

VK6RES, VK6RAK, VK6RKB, VK6RNW, VK6REE are all non-operational:

70 cm:

438.025MHz VK2RTW Wagga (not on 438.675)

There is a new 70cm device in VK1 on 438.050.

VK2RON changed temporarily from 439.525 to 439.925MHz to avoid LIPDs, but will change again to avoid interference to a WICEN repeater.

VK6RTH, VK6RVP, VK6RUF. All need 123Hz CTCSS tone.

VK6RUF (70cm Perth) and VK6RMS (2M Mt Saddleback) are permanently linked.

VK6RTH (70cm) and VK6RCT (2M) should be linked soon.

VK6RHF (10m), VK6RAP (6m), VK6RAP (2m), VK6RUF (70cm), VK6RMS (2m), VK6RBN (2m), VK6RNW (2m) are linked temporarily for the WIA news and other broadcasts.

From various posts to vk-repeaters at yahoogroups

TRAGEDY STRIKES DX-PEDITION

An avid DX'er on a holiday DXpedition to South Cook Island has now returned home to Queensland with the body of her husband, also a radio amateur, who was killed in a road accident.

June Sim VK4SJ and Doug Sim VK4BP were in the final days of a four week holiday in the Cook Islands, when Doug was out riding on a borrowed motor bike on Rarotonga and was fatally injured in a collision with a van.

June had been signing ZK1AYL for two weeks on the island of Aitutaki then two weeks on Rarotonga, both in the South Cooks.

Her OM Doug, who had taken out the callsign ZK1SIM, was enjoying the sights of the South Pacific, while June was on air working DX.

The DX community around the world is expressing its sympathies for June VK4SJ and her family.

From WIA Victoria NEWS

WHERE DID YA GET IT?

Looking for more recommendations -- hint hint.

Send ideas to NERG NEWS.

HAMFESTS

Saturday 19th July - GGREC - Gippsland Gate Radio & Electronics Club HAMFEST. Now at a new venue all under cover. Cranbourne Public Hall, Clarendon St, Cranbourne (Melways 133-K4)

Opens 10am - \$5.00 entry. Sellers Tables incl 1 entry \$18, setup 8:30am. Contact Keith Sadler 5995-7958 or hamfest@ggrec.org.au

2003 EVENTS

2003 Calendar

- June 7-8 Mt Gambier Convention - South East Radio Group**
Annual Convention and Australian Foxhunting Championships. Details and table bookings Wayne Kilpatrick VK5ZX (08) 8725 4335
- June 7 VK/Trans-Tasman Contest - CW**
6 hour 80m CW contest, for VK's & ZL's only.
- June 14-15 Novice contest (All modes)**
- June 14-15 International Museums Weekend (?)**
- June 21 80m Dash for the Wadda Cup - SSB**
- June 28 ARDF event - Watson's Glen (King Lake N/P)**
10am Marshalls Rd via St.Andrews (510 P12), Melways 265-K0
- July 5-6 GippsTech 2003 - Gippsland Technical Conference**
VHF, UHF & microwave experimenters lectures.
Peter Freeman VK3KAI (03) 5122 6416
- July 5 Jack Files Contest - CW/SSB/PSK31**
- July 13th Metro/ARDF - Cardinia Reservoir Park**
10am, enter Cardinia Creek Rd, Melways 126 B11
- July 19 Pacific 160m Contest - CW/SSB**
for P2, ZL & VK stations only.(rules in June AR)
- July 26 Snow ARDF - Lake Mountain**
(pending snow!)
- July 27 Metro/ARDF at Toorourrong Reservoir - if Saturday's snow ARDF is cancelled,**
Left from Kinglake/Yea Rd 4km from Whittlesea, Melways 610 N11
- Aug 16-17 Remembrance Day (RD) Contest (All modes)**
- Aug 16-17 International Lighthouse weekend**
0001 UTC Sat. until 2359 UTC Sun.
- August 23 ARDF event - Greensborough by VK3VT or Snow ARDF (if July 26th event cancelled)**
at Lake Mountain, again pending snow
- Oct 18-19 JOTA - Jamboree On The Air (Scouts and Guides)**
- Nov 28-Dec 3 The 5th IARU Region 3 ARDF Championships**
Mt Helen Campus, Victoria University, Ballarat.
Info: www.ardf.org.au

Collected from AR magazine, WIA Vic, Vic ARDF Group

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	Dave Pricor	VK3JMB	9465 9708
	Peter Cosway	VK3DU	9379 3626
Social Sec.	Don Haslam	VK3KDT	9439 1102
Repeaters	Mark Harrison	VK3BYY	9435 3043

Meetings

2nd Thursday of each month at 7.45 PM (excepting Dec. & Jan.)
Greenhills Community House, Yandell Reserve, off St. Helena Road,
Greensborough. (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.ql.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

6m beacon VK3RMH CW 10 Watts 50.295 MHz – Soon!

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.ql.net/vk3rmh>

NERG NEWS submissions and comments invited:

editor: Mark Harrison VK3BYY

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

post: 266 Nell Street West, Watsonia, 3087

email: vk3bvvt@nerg.asn.au



NERG

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

MEETING this week

7:45 PM Thursday 12th June 2003

This Month – David Battle : New technology for Outside Broadcast vehicles

2003 CALENDAR (NERG ACTIVITIES IN BOLD)

June 7 th	VK/trans-Tasman Contest - 6 hour 80m CW contest, for VK's & ZL's only. 6pm-Midnight.
June 7-8 th	Mt Gambier Convention - South East Radio Group convention, Australian Foxhunting championships, and ARDF event. Info Wayne Kilpatrick VK5ZX (08) 8725 4335
June 12th	NERG Meeting - 7.45pm- New technology for Outside Broadcast vehicles
June 28 th	ARDF event - Watson's Glen - Starts 10:00am at Marshalls Rd (Melways 265-K0)
July 5-6	GippsTech 2003 - Gippsland Technical Conference - Peter Freeman (03) 5122 6416
July 10th	NERG Meeting - 7.45pm
June 13 th	Metro/ARDF - Cardinia Reservoir Park, 10am, Melways 126 B11, take Cardinia Crk Rd
July 19 th	GGREC HAMFEST- Sat 10am Cranbourne Public Hall, Clarendon St, Melways 133-K4
August 14th	NERG Meeting - 7.45pm - Annual General Meeting