



NERG NEWS

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

September 2002

7:45 PM Thursday 12th September 2002

Greenhills Community House

At the meeting this month:

- **German Spy Equipment**

NERG Inc.
PO Box 270
Greensborough
Victoria 3088

What's on this month?

Plans for this month's meeting struck trouble until well-known NERG, Gerhard VK3EWM, offered plan-B in the form of a talk about **German Spy Equipment**. Everyone knows a good spy needs more than one plan-B so it will be interesting to see what else Gerhard has up his sleeve (a secret radio perhaps?). This is bound to be an entertaining and educational night. See you there on Thursday 12th Sept.

Next month Russell VK3DRW / VK3EKH from the Astronomy Society of Victoria will be talking about amateur astronomy of both the optical and radio telescope kind and other related topics. Mark, vk3byy

August Report:

August saw the **AGM** go off with its usual speed and precision for office bearers for the year 2002-2003. Most of last year's executive are back again although Betsy, vk3hbk, somehow missed the nominations. We can always do with the thoughts of our newer members so I'm sure we'll be inviting her back on board in an advisory role. A vacancy still exists for meeting coordinator.

Chris VK3CKH exhibited a couple of ex-mobile phone tower antennas. These things look pretty small on top of towers but are rather large on the ground. Opening up the antennas revealed a number of dipoles mounted inside aluminium boxes and being fed by coaxial phasing harnesses. Electrical adjustments on the back of the antenna allow the antenna pattern to be "down tilted". Unlike amateur DX antennas, the idea here is to get the RF out to the local customers and not waste it going over the horizon!

The **NERG Birthday Party** finished off the night with the traditional Chocolate Cake and loads of other goodies for supper. Many thanks to Marg and all her willing helpers for a great spread!

Tuesday Morning tea group

The next morning tea gathering will be held on Tuesday 24th Sept at Gerhard's place, VK3EWM. A wide range of subjects will be discussed and will no doubt include the



• Final Call for NERG Membership Fees

relative virtues of Black Forest Cake versus Apple Strudel (as well as DX, etc). ☺

Getting Tough on Late NERG Memberships

The time has come! This year we are getting tough on late NERG membership fees. You should find a membership form attached to this issue if you haven't already paid up. **If so then this will be the last issue of NERG NEWS you will receive until your membership is paid up.** (of course other newsletter editors and individuals that have made extraordinary contributions to the NERG continue to).

Non-members can read the NERG NEWS on our web site at <http://www.nerg.asn.au> but will risk missing meetings and special offers.

Membership details appear on the back page of every NERG NEWS issue. Please contact Marg VK3VOJ if you think our records have gone astray.

VK3CNE – New Packet BBS

The NERG has been assigned 144.700MHz for a new packet node in the outer North-Eastern suburbs of Melbourne. Construction of the node is under way and will include a packet BBS, digipeater, DX & APRS clusters, and a future 70cm node.

Some hams have made the comment "why bother – it's only 1200 baud", however there are much scope for new and innovative non-QSO applications that work at this speed.

Mark VK3XXX will be running the node using the club's callsign VK3CNE.

GASS Goes Well

WIA (Vic Div.) and volunteers from all the Melbourne clubs mounted a hands-on display of amateur radio at the Museum of Victoria during the Great Aust Science Show. Gerhard vk3ewm & Mark vk3byy representing the NERG.

Working demonstrations of Morse Code, Crystal sets, HF radios, VHF radio, Slide shows and IRLP were all present. IRLP impressed visitors who were able to make contacts with hams around the world.

The weekend was fairly quiet but the Friday saw many eager school groups spending time at our stand. With luck some of them will go on to become hams in the future.

RD Contest Report

Band conditions during the Remembrance Day Contest last month was unusually quiet. Reports suggest that fewer stations than normal were heard despite the exceptional 80m conditions and the challenge by another state to carry off the trophy. Even so, some stations were heard handing out numbers as high as 289 near the end of the contest.

(Participation at the VK3BYY shack was rather limited due to other activities, however I was able to exchange numbers with VK call areas 2 through 7 – not bad for half an hour of operating after midnight! Next time I'll aim for all ten VK areas ☺)

RT85 scanning hints

The AWA RT85A has a scan mode that is handy for monitoring local 70cm repeater activity. Unfortunately a couple of the repeaters suffer severe interference from LIPDs and co-located intermods, rendering the scan function next to useless as it keeps stopping on these channels.

Fortunately you can remove busy channels from the scan list by pushing the DOWN button while the radio is stopped on the offending channel - although it only works while the BUSY light is on. Up to 4 channels can be 'skipped' this way.

Unfortunately a bug in the software causes the DOWN button to resume scanning as soon as it is pressed and will subsequently stop on the next busy (but wanted) channel and add it to the skip list as well if the button is held in too long.

Normal scanning of all channels is resumed if the SCAN button is used to stop and restart scan mode.

Alternatively the PTT button may be pressed to stop an active scan mode. In this case pressing the SCAN button will resume scanning but continue to skip the previously programmed 'skip' channels.

The UP button can be pressed to skip over a busy channel and continue scanning from the next channel - handy when monitoring several QSO's on different channels.

These options have been programmed into the NERG EPROM's and may not be available in EPROM's from other groups.

Rally of Melbourne 2002

WICEN and other amateur radio volunteers will again be providing communications at this major car rally event. The radio network is quite complex consisting of more than 80 FM900's alone, not counting many other radios operating on other bands and a packet radio network. Various long distant links will be used link up race control in Albert Park to the rally area located in and around Yarra Valley. The rally takes place on the weekend 21/22 September.

Silent key for Eddystone

The great radio producer, Eddystone, is closing its doors. Many amateurs will know Eddystone as a producer of commercial HF radio receivers and transmitters, particularly those of the valve variety that were much sort after by amateurs up until the advent of solid-state Japanese and American black boxes.
(See WIA's AR magazine for full story)

New Callsign

Joe, one of our newer NERG members has passed his exams and now has the callsign VK3JSA. Congratulations Joe! Hope to hear you on the air soon.



Ahoy - Amateur Beacon!

The Union Argentina de Radio Clubs Civil Association (UARC) is launching a beacon with a difference! This is a sea going buoy to be launched into the south Atlantic. The buoy's CW beacons operate 15-Watt transmitters on 14.046 and 28.1925MHz into vertical antennas using callsign LU0ARC.

Reports and current data from the beacon are sought by UARC, please e-mail to LU5DZB Carlos Zárate, cuchin@speedy.com.ar. QSLs will be available.

The buoy was constructed as a navigation beacon in 1972. Some of its specs are:

Gross weight: 4800kg
12mm Naval plate steel
8.42m high, 2.18m diameter
Visual height above water: 3.1m
Visual beacon visibility: 17km

The buoy's CW beacon includes data on Time & Date, GPS Location, Battery voltage, Light level, Air & Water temperature.

Typical CW transmission without GPS data:
VVV LU0ARC LU0ARC; 13.8 V; LIGHT 050; TC 32.8; TW 28,3 AR

Including GPS coordinates:
VVV LU0ARC LU0ARC; 06/02/02; 12,34 UTC; 39,34 S 058,26 W; 13.8 V; LIGHT 050; TC 32.8; TW 28,3 AR

For more news on the buoy see:
<http://www.uarc.org.ar/proyectoboya.htm>

Rumours

Good news from the WIA is that Western Australian Police are not so keen on using the low end of the 70cm band after all and that amateurs may not lose the 420-430MHz allocation (currently used by amateur repeater links, Amateur Television, etc).

However there are rumours that Victorian government services are thinking of using the 420MHz band. One wonders if several thousand 420MHz handsets left over from the Sydney Olympics might not be doing a travelling salesman tour of Australian states? Lets hope they don't stop here!

City amateurs never really expected paging transmitters to vacate the 148-149MHz band entirely and free the 2m band from the dreaded pager interference. In another rumour, pagers may be back in force with a new statewide paging network in the works.

If this happens then country amateurs may also be looking for cavity notch filters and high intermodulation proof front ends in their 2m radios.. ☺

- Important Safety Notice - Fluke Digital Multi Meters: Fluke models 175, 177 and 179

August 2002,

The Fluke Corporation has issued a safety notice and recall on its early-version Fluke 175, 177, and 179 digital multimeters (DMMs) manufactured between 1st Jan and 12 July 2001. This notice does not apply to serial numbers above 79000001 or those followed by an 'R'.

THE PROBLEM: When measuring AC voltage above 500 volts, the display on affected meters can be slow in showing a final, accurate measurement. The final reading may not be displayed for 6 to 18 seconds. During this delay, the meter may not indicate that high voltage is present, placing the user in a potentially hazardous situation. No injuries have been reported as a result of this situation.

Four customers in Canada and Australia where the high voltage norm exceeds the 480 volt U.S. standard have reported this slow-response issue. Owners of the affected meters should contact Fluke or their agents as soon as possible to arrange repair of the meter.

- Important Safety Notice - FLUKE Series III, Models 21, 23, 26, 70, 73, 75, 77, 79, and FLUKE Series II Model 73

July 1, 1998,

Fluke is aware of a product malfunction in a limited number of Fluke digital multimeters (DMM). The affected models listed above are imprinted on the case bottom with serial numbers between 70800000 and 71100000. No other Fluke instruments are affected. DMMs with the possible malfunctioning switch were shipped from the factory between May 1998 and July 1998.

The malfunction may occur after the DMM has received an impact, such as being dropped, causing part of the function switch to become dislodged from its mounting. Even though in most cases a failure will result in an inoperative meter, it may be possible for the meter to indicate a reading of (or near) zero volts. **WHEN THE MALFUNCTION OCCURS, THE METER MAY NOT INDICATE THAT HIGH VOLTAGE IS PRESENT, PLACING THE USER IN A POTENTIALLY HAZARDOUS SITUATION.**

In you have one of the models within the serial number range given above, it is strongly recommended that you return your meter for possible switch replacement, even if you have not experienced this problem. If found to be defective, Fluke will replace the switch in your meter without charge.



Baxter Award 2002

All radio clubs have an annual award for something or other. Not to be left out, the NERG has started it's own award which this year is named "The Baxter Award" after it's inaugural recipient Jim Baxter VK3DBQ. Jim received the award for supporting more amateur radio service departments and technicians around Australia than any other NERG during the last 12 months. Above is a photo of Jim with some of the equipment that helped him win the award this year.

The trophy is, appropriately, a handheld radio that had been run over a few times and subsequently nailed to a piece of polished 4"x2" hardwood (lovingly handcrafted and donated by Mark, VK3XXX). Not even a cheque book amateur could revive this one!

US Air Force Adopts HF for E-mail System

Excerpts from an article published in "Whats new in radio communications" Aug 2002

The Air Force is introducing a new HF radio system to pass electronic mail to aircraft deployed around the world. It may seem amazing that anyone would use e-mail over high frequency radio to effectively modernise and expand the reach of command and control communications to forces deployed around the world. However, technological advancements allow HF e-mail systems to be delivered at a much lower cost than the more modern satellite radio systems.

The Air Force has been a pioneer in HF radio technology since the legendary General Curtis LeMay, commander of the Strategic Air Command during the height of the cold war and ham operator, pushed the use of HF in the ham world and later influenced the Air Force's decision to adopt it.

Using modernised radios with automatic link establishment (ALE) and new modulation schemes, HF systems can now routinely transfer data at rates of 2400 bits per second.

Occasionally data transfer rates of 4800 bits per second can be achieved, with promises to achieve data throughput of 32,000 bits per second for some applications.

HF e-mail is more complicated than Internet e-mail because of the unique controls required to key the transmitters, but functionally they are the same. Although the aircrews will not be Web surfing from the cockpit anytime soon, they will be able to pass e-mail messages with relative ease.

The Command HF radio system consists of several HF radio stations around the world connected together via various public and DoD networks such as the Internet's military ("mil") domain. The stations relay ground signals to the aircraft in the HF frequency range from 3 - 18 MHz. The signals can be beamed in a direct line-of-site, but are more frequently bounced over the horizon separating HF ground stations and aircraft using the atmospheres ionospheric layers.

Automatic Link Establishment (ALE) technology automatically selects the best ground station and frequency for optimum communications between aircraft to ground. This overcomes the traditional problems of manually selecting a frequency for best propagation based on constantly changing variables such as sun spot activity, time of day, atmospheric conditions, ground magnetic characteristic, etc.

ALE uses computer-driven radios to scan all available frequencies. The computer builds a database of the frequencies through which each aircraft has the best contact. ALE constantly checks viable frequencies for quality, then uses the best frequency for each call. If more than one ground station is available then ALE will select the best one for routing messages. ALE establishes a quality connection on its first attempt more than 95% of the time.

HF has long-term financial savings over satellite. In addition, HF has a range advantage over other radio systems. Another

advantage is the HF airways are always available, whereas DoD satellite availability is often limited by other very critical mission needs. The Air Force is collaborating with the Navy in maintaining the ground stations.

Despite the less glamorous perception of HF radio communications, the use of the HF spectrum continues to improve and to grow. This old technology will continue to receive face-lifts and is certain to be around for many decades to come.

Calendar 2002

SEPTEMBER

Sept 15th - Shepparton and District Amateur Radio Club Hamfest
St. Augustines Hall, Orr St, Shepparton.
Opens 7am for traders, 10am for public.
Info: Jacek Szczurek VK3TJS 0408 31 36 49 or VK3SOL

OCTOBER

5/6th Oct - Oceania DX Contest - Phone

12/13th Oct - Oceania DX Contest - CW

19/20th Oct - Jamboree On The Air
Scouts and Guides on the air (JOTA)

26/27th Oct - Ballarat Hamvention
Wool Pavilion at the Showgrounds, corner of Creswick Road and Howitt Street Wendouree - access off White Street.

Info: Steven Dick VK3MNA 5331 5526
vk3mna@barg.org.au

Entrance fee is \$5.00. (under 15 free),
(trestles hire \$10.00 each bookings essential)

NOVEMBER

1-3 Nov.- SEANET 2002
Perth, further info: www.qsl.net/seanet2002

2/3 Nov. - WIA Spring Field Day
VHF/UHF/Microwave field day

17th Nov. - OneTech'02 Canberra
Showcase radio and electro-technology symposium. Info and registration
www.vk1.wia.ampr.org

DECEMBER

16th Dec - Maggie Iaquinto VK3CFI
speech on communications with the MIR space station, to the Space Association of Australia, meeting room, Richmond Library, 415 Church Street, Richmond (near Church and Swan Streets corner), arrive 6.30pm for 7pm start.

Compiled from WANSARC & WIAVic news
<http://www.wiavic.org.au>

WANTED

Mark VK3LI is looking for a 2m FM box to keep in touch with NERG nets. A FM900, MTR85, or similar synthesised rig would do nicely for the shack.

Call Mark VK3LI, or leave word with Don vk3kdt or Mark vk3byy.

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	9459-9876
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.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 635	

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.qsl.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: vk3byy@nerg.asn.au



NERG

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

MEETING this week::

7:45 PM Thursday 12th SEPTEMBER (the 2nd Thursday of each Month) at:

Greenhill's Community Centre, Yandell Reserve, Greensborough

This Month – German Spy Equipment by Gerhard VK3EWM

CALENDAR 2002

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|------------------------------|--|
| Sept. 12th | NERG Meeting – German Spy Equipment |
| Sept. 15 th | Shepparton and District Amateur Radio Club Hamfest, St. Augustines Hall, Orr St, Shepparton. 10am. Info: Jacek Szczurek VK3TJS 0408 313649 or VK3SOL |
| Sept. 24th | NERG Tuesday Morning Tea Group – QTH of VK3EWM |
| Oct. 10th | NERG Meeting – Topic: Astronomy – visual and radio |
| Oct. 19/20 th | Jamboree On The Air (JOTA) |
| Oct. 26/27 th | Ballarat Hamvention - Wool Pavilion/Showgrounds, Wendouree, off White St.
Info: Steven Dick VK3MNA, ph 5331 552 |
| Nov. 14th | NERG Meeting – Topic: Foxhunting for beginners |