



NERG NEWS

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

September 2003

NERG Inc.
PO Box 270
Greensborough
Victoria 3088

WHAT'S ON THIS MONTH

NERGs are getting interested in Amateur Television so Don, our devoted meeting organiser, has invited **Gary Kennedy, VK3KHB**, to tell us more about the subject. Gary will be **demonstrating his ATV transmitter** with live camera input. ATV as been around for quite a while now. Since it's inception the technology has changed considerably, especially in the camera and VCR department. The size of transmitters and receivers has also shrunk a great deal, often involving tiny surface mounted components. However there is still plenty of scope using discrete semiconductors or even valves in building home brew equipment. It's still largely an experimenter's domain in amateur radio.

You are invited to bring along a camcorder and gather some video in preparation for your first ATV broadcast !

Enjoy the tea and biscuits...

See you around 7.45pm on Thursday, 10th August at **Briar Hill Primary School, Gladstone Rd Briar Hill, Melway 21-B3.**

ABOUT THE AUGUST MEETING

It was a special night as we combined the NERG annual general meeting, the election of office bearers and our birthday celebration party. Not only did we have our AGM, election etc. but we also had an interesting short update given by Mark, VK3PI on where the interests in ATV are heading and what are some of the establishment costs that are involved. Thanks to Mark, one might say he is a "Tower" of Strength and assistance with ATV.

To this we had the benefit of holding the meeting at our new home in the Briar Hill Primary School.

The formalities of the night kicked off with the surprise return of Greg, VK3VT, whom when last heard was touring somewhere in the outback of F.N.Q. Greg presented his Presidents speech followed by Club Secretary Mark VK3XXX and Treasurer Marg VK3VOJ.

Mark in his speech presented framed certificates to Dave VK3JMB for his wonderful efforts in presenting the weekly NERG Net and to Mark VK3BYY for the terrific NERG News that he produces and this was roundly back up by Greg citing the many other things that Mark does that keeps the NERG running.

The "Traditional" raffle was held, this year for a pleasant change the prize was Dinner for Two at Di Ricardo's Restaurant in Lower Plenty.

The lucky winner was Ian Vk3BGE.

Jim Baxter officiated the initial elections, the results being:

President	Greg Williams	VK3VT
Secretary	Mark Beecham	VK3XXX
Treasurer	Marg Baxter	VK3VOJ
NERG Editor Plus:	Mark Harrison	VK3BYY

AT THE NEW MEETING ROOMS:

BRIAR HILL PRIMARY SCHOOL

7.45 pm,

Thursday 11th September 2003

Gary, VK3KHB with

An Introduction to Amateur Television



Committee:

Peter VK3DU,
Betsy VK3HBK,
John VK3ZRV,
Don VK3KDT

The NERG wishes to thank Dave for his work on the committee over the past few years, and welcomes John Weir and Betsy King onto the committee for 2003-2004

The official part concluded and we then celebrated the NERG birthday of some 30 years in operation. Thanks to all for the food and nibbles, it made for a good night.

Don, VK3KDT

TUESDAY MORNING TEA GROUP

The NERG morning tea was held on Tuesday 26th August with a good attendance of Mark VK3XXX, Gerhard VK3EWM, Steve VK3JSE, Alan VK3JPK, Greg VK3VT, Dave VK3JMB, Ian VK3BGE and Jim VK3DBQ with Marg VK3VOJ doing the catering.

As usual there was more food than could be consumed and was very tasty indeed. A good time was enjoyed by all with many radio and computing issues discussed.

The ACA discussion paper was given a great deal of time with operators trying to develop their our position on the issues. The main item of concern is any proposed change to the interference procedures. No one wants to see the ACA withdraw from this vital area.

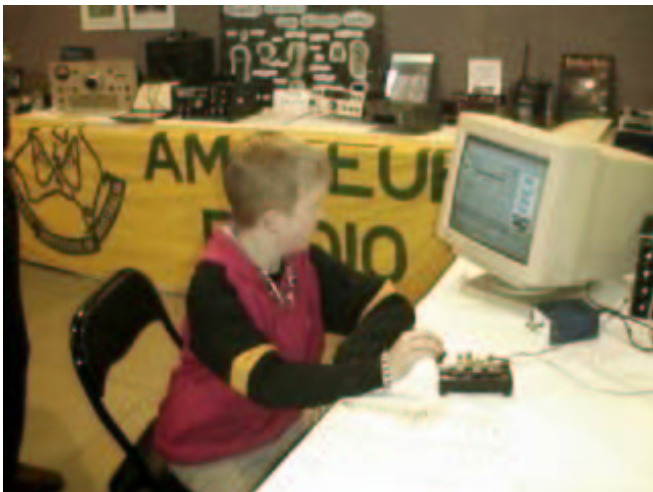
The next NERG morning tea will be at the QTH of Dave VK3JMB on Tuesday the 23rd September 2003 starting at 10am.

73, Jim VK3DBQ

GASS OVER FOR ANOTHER YEAR

A fine effort was put in to WIA Victoria's stand at this year's Great Australian Science Show by amateurs from all the Melbourne metro radio clubs. The WIA display ran for three days with the aim of showing the public, especially young people, what amateur radio is all about.

Whilst the first days coincided with the RD contest and the Lighthouse weekends, we were not able to participate from the Museum station. The stylish metal clad building and electronic lighting makes HF and VHF operation impossible. Fortunately a twelve-element beam was able to reach a temporary IRLP node located just down the road and we were able to make a few "DX" contacts, albeit on 70cm FM, however these don't count for contests so not many contesters were heard.



Young visitor a GASS takes the Morse Code challenge to send his name well enough that the computer understands it.

Usual displays included 2m FM radios that kids used to talk across to room, a disassembled mobile phone showing what's inside, examples of homebrew ham gear, a challenging Morse Code key with computer display (very popular with kids!). Jack VK3WWW's DVD-video attracted a lot of attention and did a good job describing the broad range of amateur activities in a short time.

It's too early to tell, but lets hope events like this will lead the kids of today into amateur radio of the future, or even into a lifetimes profession!

Mark VK3BYY

ACA REQUESTS COMMENT

If you are a licensed amateur operator you should have received a letter from the Australian Communications Authority about the review of amateur service regulations. The ACA proposals have sparked quite a debate amongst the amateur community.

One view is that the ACA want to reduce amateur radio to a class license system similar to CB radio, with not only the removal of all protection from interference, but also the requirement that amateurs go off the air immediately they cause interference to anyone, even if they have sub-standard consumer equipment or a poor installation!

On the other hand, others are saying the ACA is genuinely interested in improving the amateur systems whilst reducing their own workload by "outsourcing" some responsibilities to bodies like the WIA. They want constructive thoughts about the future of amateur radio and would like your responses in by 31 Oct.

However, a reasonably united response is required - the last thing we want is for two or three ACA staff to be locked in a dark room reading our responses for the next two decades! Before you fire off your own 100-page submission, attend the meeting on Wed 8th October to discuss these matters with the ACA (Venue to be announced). Also look at the WIA's responses, which will be published on their web sites and in AR magazine, before send in your key supporting or opposing comments.

AUSTRALIAN ARDF CHAMPIONSHIPS

The Australian ARDF Championships will be held in **Ballarat on Saturday 11th October 2003**. Everyone is welcome to enter. There are openings for **Junior, Open and Seniors categories for Males and Females**.

This is a major event on the Radio calendar, and will be run according to Region 1 International rules this year as a trial run for the IARU Regional Championships that follow in November.

Date: Saturday 11th October, 1:30pm
Location: Ballarat Area
Band: 2m, Standard 5 Transmitter ARDF
Course Setter: Mark Diggins, VK3JMD
Cost*: Adults: \$16, (VicARDF/WIA: \$12)
Juniors: \$12, (VicARDF/WIA: \$8)
Also: SportID stick hire: \$5

BBQ afterwards: Register for it or BYO

[*Note: Costs are a little higher for this event to cover liability insurance as this is not a VOA event.]

You can register for the event online on our website at: <http://www.ardf.org.au> (go to Local Events Area), or simply send an email to <mailto:brucep@netspace.net.au> Mention if you need to hire a sniffer.

Competitors hoping to compete in the Australian team in the Regional Championships are strongly encouraged to compete in the Australian Championships so we can sort out the teams.

There are currently team vacancies in all age categories. At the Australian Championships we hope to use much of the infrastructure required at the Regional championships, including the new Radio transmitters and Sport Ident. system (electronic tags). If you already have a SportID then please quote your number in your registration.

Bruce, VK3TJN

NERG SWAP MEET NEXT MONTH !

It's time to give that shack of yours the spring clean it's needed since the last White Elephant was installed!

The NERG is running a friendly swap-night as it's October meeting (Thursday 9th Oct). NERG and WANSARC members are invited to bring along their wares.

Donations towards the NERG fundraising table will be gratefully accepted!

Don't miss this once a year chance to swap a load of your old junk for a load of completely new junk. If you don't have any junk then it's time you collected some! There are bound to be some real bargains amongst it all as well as new items and a few free giveaways.

Not fee for tables (there won't be any tables!), and the normal gold coin for tea/coffee.

For more details on tables, fees, etc, see next month's NERG NEWS.

(for the really eager, contact Don now on his mobile **0409 024597**)



2003 EVENTS

- Sept 11th** NERG Meeting - 7.45pm - Amateur Television
- Oct 9th** NERG Meeting - 7.45pm - White Elephant night
- Oct 11** Australian ARDF championships - Championships - Ballarat, Saturday.
- Oct 18-19** JOTA - Jamboree On The Air & JOTI (internet) Scouts and Guides on the air.
- Nov 13th** NERG Meeting - Ionospheric Prediction Graphs for better DX'ing by Jim VK3DBQ
- 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 11th** NERG Christmas BBQ
Collected from AR magazine, WIA Vic, Vic ARDF Group

NERG NOVICE CLASSES

STARTS 23RD SEPTEMBER 2003

Be quick - Novice classes are back on again!

A series of eleven classes held on Tuesday and Thursday nights run through to November when exams will be held.

There is no time like the present to become a Novice - it is quite likely that successful novice candidates will automatically be upgraded to full amateur privileges when the proposed changes to regulations occur in 2005.

Morse is available for those that wish to learn it and although Morse may be dropped from the regulations next year, it will still be required if travelling to some countries overseas.

For more details call Peter Cosway on 9379-3626, or email Greg Williams at: vk3vt@nerg.asn.au

Subjects covered include:

- Electrical Laws & Fundamentals
- Semiconductors & Valves
- Power Supplies
- Oscillators & Amplifiers
- Receivers
- SSB & FM Transmitters
- Propagation
- Antennas & Transmission Lines
- Test Equipment & Measurement
- Interference & Safety

Location:

Briar Hill Primary School,
Gladstone Rd (off Sherbourne Rd)
Briar Hill,
Melway 21-B3.

Starting Time:

Morse Practice: 7.30 PM
Theory: 8.00 PM - 10.00 PM

Cost: \$120 including NERG membership.

*Due to technical difficulties -
we cannot bring you the world
today!*

LET'S GET SERIOUS ABOUT ATV

Our Western And Northern Suburbs cousins at WANSARC are getting into ATV, so now is the time to pool our resources and by doing so gain an even better deal on some ATV kits.

The following is a brief summary of basic kits and prices (subject to some discounts depending on quantity ordered):

430MHz AM Video transmitter kit—produces 100mW, kit includes plated PCB, all onboard components.

Complete kit without crystal **\$48.50** Crystal for either 426.250 MHz or 444.250MHz **\$29.90**

(Note 444.250MHz is the output of the ATV repeater).

1250MHz FM video transmitter kit—up to 50mW output.

Complete kit includes PCB and all on board components.

Complete kit **\$40.00**

Audio/subcarrier kit—consists of audio pre-emphasis, preamplifier, subcarrier oscillator—suitable for microphone or line input levels. 5.5Mhz IF used for 430/1250MHz transmitters.

Complete kit 5.5MHz \$35.00

Linear amplifiers— according to the latest web information the availability of power amplifier kits is to be clarified in the near future.

A question still hangs over the retention of spectrum which would allow ATV'ers to continue to transmit on 426.250MHz, however no firm decision has been made so some may wish to purchase a kit for simplex ATV as well as the repeater FM kit. Bill VK3KBL is certainly active on 426.250Mhz and can be seen in the northern and western suburbs, - he would like some company on the frequency.

Now how do we proceed? Firstly, the above information has been extracted from Mark VK5EME's web site and if you would like to find out more about available products, go to www.minikits.com.au.

Secondly, if you have decided on what you would like to order, then talk to us at the next NERG meeting, or contact Mark VK3PI at WANSARC directly on vk3pi@optusnet.com.au advising of the kits you wish to order. No money will be required at this stage, as the intention is to obtain a total quantity list of kits required by both WANSARC and NERG members.

Once a combined list has been compiled, Mark will then extract the necessary dollars from you all and the bulk order will be forwarded to MiniKits. So get cracking—have a think of what you may want and let's get this show on the road!!

ATV - NOW LETS GET SERIOUS!

CAT INSTALLED ???

After every flight, pilots complete a gripe sheet which conveys to the mechanics problems encountered with the aircraft during the flight that need repair or correction. The form used is a piece of paper on which the pilot completes the top part listing the problem, which the mechanics read and then respond in writing on the lower half of the form what remedial action was taken, so the pilot on the next flight of that plane can review the form before taking off. Never let it be said that ground crews and engineers lack a sense of humor. Here are some actual logged maintenance complaints and responses:

(P = the problem logged by the pilot,

S = the solution and action taken by engineers).

P: Left inside main tire almost needs replacement.

S: *Almost replaced left inside main tire.*

P: Test flight OK, except auto-land very rough.

S: *Auto-land not installed on this aircraft.*

P: Something loose in cockpit.

S: *Something tightened in cockpit.*

P: Dead bugs on windshield.

S: *Live bugs on back order.*

P: Autopilot in altitude hold mode produces a 200 feet per minute descent.

S: *Cannot reproduce problem on ground.*

P: Evidence of leak on right main landing gear.

S: *Evidence removed.*

P: DME volume unbelievably loud.

S: *DME volume set to more believable level.*

P: Friction locks cause throttle levers to stick.

S: *That's what they're there for.*

P: IFF inoperative.

S: *IFF always inoperative in OFF mode.*

P: Suspected crack in windshield.

S: *Suspect you're right.*

P: Number 3 engine missing.

S: *Engine found on right wing after brief search.*

P: Aircraft handles funny.

S: *Aircraft warned to straighten up, fly right and be serious.*

P: Target radar hums.

S: *Reprogrammed target radar with lyrics.*

P: Mouse in cockpit.

S: *Cat installed.*

(It must all be true - it came from the WEB!)

This month marks two years since the World Trade Centre disaster on September 11. Of the nearly 3,000 that died, six were on-site broadcast engineers and technicians tending the two FM and ten TV broadcast transmitters. Until that fateful day the 110m mast atop the 426m WTC had been the prime transmitting site for FM radio and TV in Manhattan for over a quarter century.

All TV broadcasts ceased just minutes after the first impact, leaving citizens to scramble for radios to find out what had happened. Even some of the cable channels went to black because they normally took off-air signals from the WTC transmissions and piped them into the cable networks. Only WCBS-TV had an off-site backup transmitter, which was located on the Empire State Building. The 30-odd year old Valve transmitter was pressed into action and provided continuous news of the disaster thereafter. Although the other stations had backup transmitters and antennas, they were located on the same WTC mast as their main transmitters.

The reason for this unprecedented TV disaster is historical. Back in 1931 the world's tallest building - the Empire State Building in New York City was completed and just eight months later the first of many television and radio transmitting antennas were erected on the building's mast - a mast originally intended for mooring dirigibles! By the late 1960's nearly all the TV transmitters in NYC had migrated to the Empire site. They remained there until the late '70's, when, after a long and bitter fight, the TV broadcasters convinced the WTC owners to construct a mast on top of the WTC, where the broadcasters spent the next quarter of a century. During this time FM broadcasters inundated the Empire site.



Empire State Building circa 1967
(from Broadcast Engineering magazine August 1967)

Since September 11, many of the TV stations have temporarily returned to the Empire State Building, but have been operating at reduced power due to the building's limited facilities. Both floor space for transmitters and mast space for antennas was at a great premium even before 9/11. However by some Herculean efforts at least one station was back on air the very next day. The rest of the stations slowly returned running low power from various temporary sites, such as the huge 120m tower constructed in 1937 by the FM radio pioneer, Major Edwin Howard Armstrong. However most proved to be just too far away from New York City and the broadcasters that missed out on the Empire site have now moved back to other high rise buildings but also remain at low power.



Armstrong's Alpine tower

(Photo fybush.com)

Finding a permanent replacement for the WTC antenna site is proving to be a tough job. There just isn't an existing structure anywhere in Manhattan that can reach the 20 million plus viewers as well as the WTC.

It's unlikely another building as high as the WTC will ever be built again. Ideally the broadcasters need a new site at least 600m above ground, located within 4.8km of the WTC - otherwise it won't reach the target audience. Sitting it further a field would run into problems with interference to neighbouring broadcasters and may obstruct flight paths into one of the busiest airports in the world. Even the existing skyscrapers are of no use - none were designed to take a mast that tall, not to mention the troubles of meeting planning regulations and battling new concerns about EMR.

The most likely candidate to date seems to be Governors Island, where a simple guyed lattice tower could be erected. However the island is earmarked for a new University and the owners see such a tower as being inconsistent with their plans. Although negotiations are under way, it could be some time before viewers receive a clear picture again (if you could ever call the American NTSC television standard "clear"!).

by Mark Harrison, VK3BYY

Read more about the WTC, the antennas on the Empire State building, and the 9/11 disaster at these web sites:

<http://www.fybush.com/wtc-recovery.html>

<http://www.lnl.com/esbantennas.htm>

<http://doc.weblogs.com/2001/10/05>

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

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 !

7:45 PM Thursday 11th September 2003

This Month – Gary, VK3KHB with **An Introduction to Amateur Television**

2003 CALENDAR (NERG ACTIVITIES IN BOLD)

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