

GATEWAY



THE OFFICIAL JOURNAL OF
THE GIPPSLAND GATE RADIO
AND ELECTRONICS CLUB INC

JANUARY 1999

Gippsland Gate Radio and Electronics Club Inc.

Club Meetings are held on the third Friday of each month
at the Cranbourne Girl Guide Hall in Grant Street.
The doors open at 8:15 PM & the meeting commences at 8:30 PM.

Visitors are most welcome.

Committee Members 1998/1999

President	Peter Pavey	VK3VB
Secretary	Pat Pavey	VK3OZ
Treasurer	Mike Ide	VK3KTO
Committee member	Ivan Blezzard	VK3ARV
Committee member	Reg Goddard	VK3UK
Magazine Editor & Printing and Dispatch	Dianne Jackson	VK3HDI Ph. (03) 9776 5000

Club Station VK3BJA Located at the Guide Hall

Club Repeater VK3RDD Freq. in 52.575, out 53.575 Mhz

Call in Freqs. are HF on 28.325 Mhz, USB

VHF on 146.225 Mhz, FM and UHF on 438.850 Mhz, FM

Visit our internet site at:

<http://avoca.vicnet.net.au/~ggrec/>

Current GGREC Inc Membership Fee Schedule

Full Member \$30.00, Pensioner Member \$15.00

Junior Member \$15.00, Extra Family Member \$10.00

Fees due after each April Annual General Meeting.

**The deadline for submitting Gateway articles is EIGHT DAYS
before each General Meeting.**

Please direct magazine correspondence to 105 Franciscan ave Frankston 3199
or E mail ijackson@netspace.net.au or Fax: 9776 5451

THE PRESIDENTS REPORT JAN 1999

1999 has dawned and we are about to launch into numerous activities as a Club. But the committee can only arrange a limited number of things on their own, we are 5 members of a membership in the order of 50 or so plus XYs YLs and other family members, this should give access to a wide range of activities and lecture topics. So how about it, put on those new year thinking caps and give some input to the committee for the coming years activities.

While on future thinking it is not too early to start lobbying for volunteers to take up positions on the committee at the Cubs AGM in April. Pat and I expect other responsibilities to increase during the next year and will not therefore be standing again. We will still be continuing with the exam service and other Club activities. So how about some new faces on next years committee, or maybe an old one that has had a little rest.

This month sees Dianne VK3HDI take on editorship of the magazine once again, thanks Dianne, and please help her in this job by supplying articles and anecdotes to print. Our thanks too to Robin VK3TFA our retiring editor for his input over the last year or so. Every success Robin in the new job.

Thanks are due to Mike VK3KTO and Naree for their warm hospitality as the venue for the Club Christmas break up. Those of you who missed it missed a great night, good food and fellowship was enjoyed a few lucky ones even ventured out with Mike in his motor launch for a cruise up the creek. I understand that the launch has since been repaired, the motor running as good as new. Thanks also to Helmut and Dorothy who opened their home for new years eve celebrations to Club members. It was a great night with plenty of laughter and good food.

Well it only remains for me to remind you all that you have just over 11 months to dig out all those old radios, TVs, typewriters, pre-1990's cars, valve transceivers, slide rules, abacus etc. For as the scout and guide motto says; 'BE PREPARED', for the millennium bug is lurking and will strike all your lovely shiny solid state whiz bang consumer bits and pieces stone dead at 0001 Hrs on 1st of the 1st 2000.

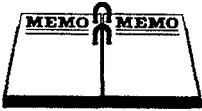
Or will it ??

73 Peter VK3VB

r.S. The happy winner of the Clubs Christmas Hamper was: Ivan VK3ARV

NEXT MONTH

An updated membership list will be included as a lift out. If you have any adjustments to be made to address details, Phone number or E-mail since the last release of August 98, please pass them on to Mike, VK3KTO the Club Treasurer so the list will contain the latest information. Mike may be contacted on 59 98 7590



Event Queue

DAY	DATE	TIME	DETAILS
Fri	15/01/99	8:30pm	General Meeting night. Talk on formatting a web page by Dave Campbell VK3XMF.
Tue	26/01/99	3:00pm	Australia Day BYO barbecue at VK3OZ/VBs 6 Bayview rd Tooradin Mel Ref 143 K8.
Wed	03/02/99	7:00pm	Radio classes begin at Cranbourne Swimming centre Grant street Cranbourne.
Fri	05/02/99	8:30pm	Prac night in Guide Hall. Committee Meeting preceding.
Fri	19/02/99	8:30pm	General Meeting night
Sat	06/03/99		Labour Day Weekend at Phillip Island. More details next mag.
Fri	19/03/99	8:30pm	General Meeting night.



Gory Details...

This Labour Day the GGREC will be going to Phillip Island. There are a lot of things to see and do on Phillip Island. Other than Penguins and Koalas there is a fantastic new Seal Rocks Exhibit, there are some great arts and craft shops, beach walks historic sites and good restaurants. To make sure that you don't miss out on this fabulous weekend, Phone Julie at the Cowes Caravan Park and make a booking as soon as possible on 5952 2211.

The Internet, and how to get your web page up and running. Dave Campbell VK3XMF will be giving a very informative talk about web pages, on the Internet, at the January meeting.

Internet Web Site Construction

By David VK3XMF this Friday Night

HD DX Notes

What to look for on the bands

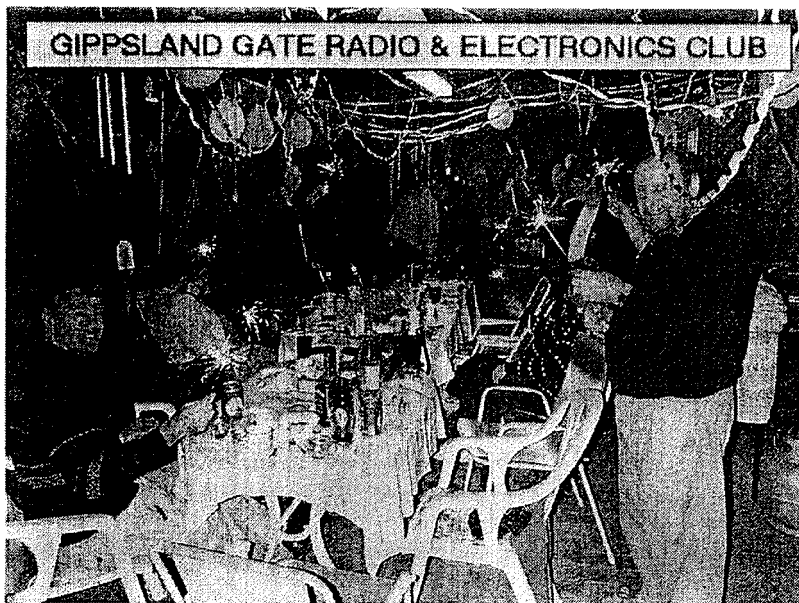
- Eritrea** Look for E30HA op is HA5YPP
QSL as in R & C magazine.
- St Helena Island** ZD7VC 20 Mtrs SSB 1800UTC.
- Malawi** 7Q7LA Mainly CW and prefers WARC bands.
- Burkina Faso** XT2OW (SSB) XT2DM (CW) Mostly WARC bands.
QSL via F5RLE op Feb 7th to March 1st

There are many other interesting call signs to listen for, pass on any 'specials' on 146.225.

Wanted: A DXer with Internet facilities to keep Club members up to date on the DX scene and QSL info. Who is willing? Contact Peter VK3VB.



Our President and Secretary, Peter VK3VB and Pat VK3OZ
with a couple of unlit sparklers



David VK3XMF and Helmut VK3DHI, Waving sparklers at midnight.

NEW YEARS EVE PARTY

By Dianne Jackson

On new years eve, about 15 Club members and there kids (about 20 people in all) went to Pakenham for a New Years Eve party. I would like to say thank you to Dorothy and Helmut for hosting such a terrific event. We had sparklers, noise makers, party poppers, balloons and enough food to last till next new years eve.

Reg, Ivan and Albert were really getting into the party mood with their party whistles. And judging by the noise coming from Reg's end of the table, I think that he must have had his own private horde of party poppers because every couple of minutes another one would go off.

We all had a great time, including Sheila (the dog) who was chained up in the back garden, still received plenty of attention. In fact this party was so good that some of the participants came back the next day and kept on partying.



Reg VK3UK, Ivan VK3ARV and Albert VK3BQO on New Year's Eve

IN PURSUIT OF THE HONORABLE DISCHARGE

By Ian Jackson VK3BUF

Have you ever had the sensation that the world has forgotten to tell you about something important? You watch TV, read your community newspapers, even discuss Internet protocols with the soft drink delivery man, but somehow bits of technology still sneak past you. A few weeks ago I was wrestling with a recalcitrant trolley in a local supermarket and spied a bubble pack of four AA cells. RECHARGABLE ALKALINES the sign said. 'Yeah Right!' I snorted through my nostrils. 'What's on the next rack, a one-bar radiator powered by rubbing cats together?' Still, the sign must have worked because I purchased a packet and mumbled indignantly to my car for the entire homeward journey.

So what does it all mean? I was keen to find out, so I did a little research and collected a substantial amount of data on this new bauble of technology. After much reading I thought it would be useful to other readers, hence I have summarised some of this information here.



Well what is a rechargeable Alkaline cell? It has similarities with conventional alkaline cells with different internal construction and chemical composition. They have slightly higher internal resistance and therefore may provide shorter run times in applications that require high continuous or pulse current loads, otherwise the discharge curve shape and charge retention are quite similar to the conventional primary alkaline cell.

They have higher initial capacity than NiCad (nickel cadmium) and NiMH (nickel metal-hydride) cells and with a vastly slower self discharge rate, but will not survive for as many full charge/discharge cycles. They exhibit no 'memory' effects which is the hallmark of NiCad cells and have the added advantage of not containing nasty heavy metals, which makes them safe for disposal in conventional land fills.

The nominal terminal voltage and capacity of a new cell is 1.5 volts at 15 milliamp/hour. Both of these values will decay with numerous charge/discharge cycles. The *rate* of decay is a complex relationship based upon depth of discharge and the number of charge cycles. If the cell is 95% drained with each usage, then there would be a mere 20-25 useable charging cycles. Conversely, if the cell discharge is kept to say 20% of its maximum capacity and then returned to the charger, it can be recharged hundreds of times with negligible degradation. This would make it good for say an emergency torch, which lives on a charger, is used for a brief period and then returned to a charging cradle to be ready for the next time.

CHARGING

This is a tricky little area. There is no telltale 'voltage knee' that is used by NiCads and to a lesser extent, the NiMH cells. Its state of charge is determined largely by its

open circuit terminal voltage. When the cell voltage has risen to 1.65V, then the cell is deemed to be charged.

A typical charge scenario is a 500-700ma pulse charge of 70% 'ON' and 30% 'OFF' performed at a 100 Hertz rate. During the 'OFF' state the cell voltage may be measured. As soon as it reaches 1.65 volts, the process stops. As soon as the voltage falls below 1.65 volts, the process is restarted.

A semiconductor manufacturer called 'Benchmarq' have developed a dedicated I.C. device which operates on this principle called the BQ2903. It has all the goodies needed to charge and maintain one to four 1.5V cells to optimum conditions. Unlike other rechargeable cells, these ones love to sit in the charger unit for extended periods and because of their incredibly low self-discharge rate, they are usually fully charged when you get them out of the packet.

The charger unit shown here (purchased recently from Radio Parts) is typical of the Reusable Alkaline charging units. It plugs directly into a 240V outlet and the cells sit there until they are needed. I must confess that I had a peek inside and noticed that it used a more conventional LM317 regulator device in a

comparatively simplistic charging circuit, but it seems to do the job quite well.

Shown here is a comparison table of three popular types of AA cell.

(Approximate Values)	Rechargeable Alkaline	NiCad cell	NiMH cell
Nominal Capacity ma/hour	1500	750	1200
Useable charging cycles	25 or more	200 or more	300 or more
Voltage under load	1.4V to 0.9V	1.2V to 1V	1.2V to 1V
Max (recommended) output	0.5 Amp	> 5Amps	>10 Amps
Self-discharge rate (room temp)	0.01% per day	1% per day	4% per day

I am sure that we will see much more of these in the near future because of their low cost (around \$2 per AA cell from the supermarket) and their suitability for extended standby operation. Maximum current limits may make them borderline for high power hand held transceivers and the like, but their potential for use in cordless phones and similar products make them a tempting alternative.

If you have not already encountered these devices, these notes should bring you up to speed. The next time someone frightens you with a bit of new technology, just nod sagely and comment on how you saw one 'just the other day', then rush home and you too can look it up on the Internet. (Unless of course, it was the Internet that they were telling you about!)



VK3APC Amateur Radio News

Information supplied by Peter Parker VK3YE

APC News is a weekly news service for Melbourne radio amateurs produced by members of the Moorabbin and District Amateur Radio Club.

APC News should be seen as a supplement to and not a replacement of the existing monthly broadcast produced by WIA Victoria. Many of us active in APC News are WIA members and continue to contribute to Institute activities. APC News is receptive to contributions from WIA Victoria, individual amateurs and all amateur radio clubs active in Victoria.

APC News bulletins are broadcast live each Wednesday evening at 8:00 pm local Melbourne time from VK3APC, the club station of the Moorabbin & District Radio Club. The transmissions can be received two metres within 50 kilometres Melbourne on 146.550 MHz. A call back will be taken after the broadcast.

Contribute to APC News

APC News accepts news items on all aspects of amateur radio, short wave listening and hobby communications. We are always seeking stories on amateur activities of all types, club news, technical hints, history, contests, DX, VHF, humour and anecdotes. A story can be anything from a rare DX station you have just worked, a club meeting or social event you attended, how you resolved a TVI complaint, memories of your first on-air contact, a recent contest, or a homebrew project that you built.

We've found that one or two paragraphs is best for most news items. Please keep sentences short, write in an active tone and provide contact details for listeners to find out more. Avoid jargon and abbreviations - pitch your article so that it can be understood by most listeners. Don't worry if you think that your that your spelling or grammar isn't up to scratch - we will edit your item so that it is.

You can send items to APC News via the following means:

E-mail: parkerp@alphalink.com.au

Telephone: (03) 9569 6751 (most evenings, some weekdays & weekends)

Post: APC News, PO Box 58, Highett, 3190 (not for urgent items)

Sending items by e-mail lessens the risk of transcribing errors and saves us time. However, feel free to telephone items through, especially if they are short and/or urgent, or you don't have access to e-mail. Because APC News aims to broadcast the latest news available, we have no fixed deadline for items. Nevertheless, it would greatly assist us if news items are received two or three days before the bulletin goes to air.

Note that additional information on this service is available on the internet in the web site: <http://www.alphalink.com.au/~parkerp/apcnews.htm>

AMATEUR OPERATORS CERTIFICATE COURSE - 1999

Conducted by the Gippsland Gate Radio & Electronics Club inc. (GGREC)

AIMS:

To assist persons in passing the necessary theory exams for an amateur radio operators license, by instruction in basic radio and electronics principles

SUBJECT MATERIAL:

Radio Theory...Syllabus as laid out by the Australian Communications Authority for Novice and Full license examinations.

(See their web site at: <http://www.sma.gov.au/publications/info/amateur.htm>)

Radio Regulations...Guidelines for passing the regulations examination for amateur station licenses.

LEVEL OF STUDY:

While the courses shall aim for AOCP (Full license) standard, persons studying for NAOCP (novice) and Novice-Limited examination shall be catered for.

TECHNICAL REFERENCES:

The course is based largely upon reference material provided on each night, (approx 200 sheets) though students are encouraged to acquire additional reference books for home study.

SCHEDULE:

Classes commence each Wednesday evening from February 3 for twenty lessons. Students will need to bring a notebook, an A4 sized folder and a pocket calculator.

FEES:

The fee for the course shall be \$125 plus a mandatory one year subscription to the GGREC Radio Club. (\$30) This fee includes regular newsletters. Fees are payable on the first class night. Discounts on the *subscription* portion apply to Students, Pensioners & family members.

LOCATION OF CLASSES:

The classes shall be conducted at the hall associated with the Cranbourne Swimming Pool Centre in Grant st. Cranbourne. (Melway map ref 133 H6) (This is near same venue that the Club uses for their regular meetings on the 1st and 3rd of each month at the Cranbourne Guide Hall.)

Persons interested in enrolling on this course should contact the number listed below as soon as possible to confirm a position in the class, as there are only a limited number of positions available.

Class Coordinator:

Ian Jackson VK3BUF..... 9776 5000