



GATEWAY



THE OFFICIAL JOURNAL OF THE GIPPSLAND GATE RADIO
AND ELECTRONICS CLUB inc.

September 2006

Incorporation Number A0016893M

Club Meetings are held on the third Friday of each month at the Cranbourne Girl Guide Hall in Grant Street. Prac nights are held on the first Friday night in the Clubrooms. Both nights commence at 8:00 PM. **Visitors will be made most welcome.**

| | | |
|---------------------|---------------------------------------|--------------------|
| President | Albert Hubbard | VK3BQO (5659 6562) |
| Secretary | Phil Pavey | VK3YB (5995 7484) |
| Treasurer | Mike Ide | VK3KTO |
| Committee Members : | Reg VK3UK, Helmut VK3DHI, Ivan VK3ARV | |
| Magazine Editor: | Andrew VK3HFA, | |

Club Station VK3BJA located in the clubrooms.

6M Repeater **VK3RDD** : Freq. In 52.575, out 53.575 MHz

70cm Repeater **VK3RLP** Freq. In 434.475, out 439.475MHz

CTCSS 123Hz IRLP Node Number- **6794** (Using **VK3RLP**)

Call in Frequencies are: HF on 28.325 MHz, USB VHF on 146.225 MHz, FM and UHF on 438.850 MHz,

Visit our internet site at: **www.ggrec.org.au**

Current GGREC inc. Membership Fee Schedule

Full Member \$37.00, Pensioner Member \$22.00

Junior Member \$22.00, Extra Family Member \$17.00

Fees due after each April Annual General Meeting.

The deadline for articles is TWELVE DAYS before each General meeting.

Please direct magazine correspondence to:

Andrew Clinkaberry, 1 Carney St. Nar Nar Goon Vic 3812

Phone: **5942 5396** or email **clinks@dcsi.net.au**

All other Club correspondence to **P.O. Box 1098, Cranbourne 3977**
or Email : **secretary@ggrec.org.au**

It costs lots of cents to produce and send each copy of Gateway.

Disclaimer- The opinions expressed in this publication do not necessarily reflect the official view of the GGREC inc and the GGREC inc cannot be held responsible for incorrect information published.



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Signs and Notices:

"Because of the impropriety of entertaining guests of the opposite sex in the bedroom, it is suggested that the lobby be used for this purpose." -- *A sign in a Swiss hotel.*

"Ladies, leave your clothes here and spend the afternoon having a good time." -- *A sign in a laundry in Rome.*

Editor's Musings

Well I sit here on Monday evening all ready to put the magazine together and realise I have nothing (or next to nothing) to put in it. I am not a technical guru as you have all guessed by now, I can't write technical articles. I can waffle a bit but that wont fill the mag. I can find little bits off the internet that might fill a page or two but it's not about the club so don't know if it's worth it. I don't, at the moment, have time to chase people for articles so either you just decide to do it or nothing will happen. End of whinge, don't complain to me about the lack of stuff in here I am only the Editor!

As I said earlier this year I am happy to do the mag for another 12 months (expires at the Annual General). It will be somebody else's turn then.

The Pres Says.....

Saturday 2nd September saw a few members doing some major work around The Club Shack. Next time you are there, if you are one of those who take note of what antennas the Club actually has in the air, you will notice that another mast has grown with a dedicated 70cm and a 6m vertical mounted on top. That was one job done on the day. Others included repairing the metal outer skin on the external door of the Club Rooms, relocating the 70cm repeater to its new location near the antenna patch panel and replacing the tower tilt over winch with a brake winch. Workers on the day enjoyed a BBQ lunch supplied as a thank you by The Club. Those people were Noel King, Ron Robertson, Bruno Tonizzo, Reg Goddard, Jan Oncken, Ivan Blezard, Mike Ide and myself. Many thanks to those people for putting in a whole day for The Club.

You will notice this month's edition has a copy of the Club Membership list. (if all goes to plan). Please advise if any changes are applicable as a few discrepancies have already been noticed. Unless you tell us of your changes, we cannot keep it up-

dated. This especially applies to email addresses. In the near future the Cub will be running its first Foundation Licence training and examination session. Tentative dates are 28th and 29th of October.

With the warmer weather on its way, we can turn our attention to spending a bit more time outdoors. Two items on the list are up for discussion again. They are a trip to the Moorabbin Airport Aircraft Museum and a Fox Hunt. Hopefully we can pull both of these off during the better months to come.

For a bit of fun, the Committee came up with the idea of a new bumper sticker for Amateur Radio promotion. We will be looking for suggestions that will get a laugh. Try Mike's "Amateurs do it with Higher Frequency" as an example. Or "Amateurs do it on Air". Have a think about it. Maybe Andrew will give a prize for the best one and we may get it printed. See you at the meeting.

73s Albert VK3BQO

If you were travelling at the speed of sound and you turned on your radio would you be able to hear it?

"You can listen to thunder after lightning and tell how close you came to getting hit. If you don't hear it, you got hit, so never mind."

UPCOMING EVENTS

| DATE | EVENT | WHO/WHAT |
|-----------------------|----------------------------|----------------|
| September 16th | General Meeting | Guide Hall 8pm |
| October 6th | Prac Night | Club HQ |
| October | JOTA | Club HQ |
| Melbourne Cup Weekend | Trip To Maryborough | See VK3JDI |
| November | ?Trip To Moorabbin Airport | TBA |
| Australia Day | Fox Hunt | TBA |



The **SM155** battery link version is shown here

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SM155: \$162.00, SM155b: \$107.00, Postage: \$6.00
(10% discount for GGREC members)

A Folded Dipole (borrowed from www.elmerhamlet.com)

A variation of the dipole is an antenna called a folded dipole. It radiates like a dipole but sort of looks like a **squashed** quad.

Having a folded dipole does **not** mean that you have an antenna that is folded in half and so you obtain an antenna that now takes up half the space of a regular dipole. No, the antenna is still approximately the same length as a regular dipole. It **is** however, an antenna that has a wire folded back over itself, hence its name.

The starting formula for the folded dipole calculation is the same as a dipole, $468 / \text{Frequency}$ (in MHz). Let's try an example: Design a folded dipole for the 40 meter band. The frequency that is chosen might be 7.15 MHz. Plugging this in to the formula ($468 / 7.15$) gives a folded dipole with a length of 65.45 feet. When I modeled a dipole on the computer at 30 feet, I came up with a length of 65.47 feet. When I added a second wire to make the folded dipole shown above, I designed the antenna with 1 inch spacing between the two wires. Note that this adds 1 more inch to each of the two antenna wires over that of a single wire dipole. This plus the fact that we are actually turning up the ends of the antenna,

means that the horizontal length actually need to be a little shorter to be once again at resonance. The total length came to 64.38 feet, 1.09 feet shorter than the straight dipole. If you use a greater spacing, say 1 foot between the wires the length is 63.1 feet, 2.37 feet shorter. So be sure to shorten the antenna a bit or you'll find yourself operating lower down the band than you expected.

The feed point impedance is also modified by the second wire. Let's say the original dipole was 72 ohms. The step-up for a two wire folded dipole is 4 times which means $4 * 72 = \sim 288$ ohms. (The computer shows 281 ohms on my example, but remember, we reduced the length slightly also.) This step up continues if you add more and more wires. A three wire antenna would provide a step-up of 9, and a four wire antenna provides a step-up of 16.

We can see why this step-up occurs by looking at the power formula $P = (I * I) * R$, this can be rewritten as $R = P / (I * I)$. If the power to a regular dipole antenna was 100 watts and the current was 1.2 amps, we'd solve for R as $R = 100 / (1.2 * 1.2)$, which is the same as $R = 100 / 1.44$, which is 69.44 ohms. In the

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Confessions of New Chum

Well nobody else wrote anything so I will babble on a bit.

Have just started taking an interest in Community Radio. I have always wanted to be a radio dj so now I get my chance apparently.

103.1 3BBR FM is the local Community Radio Station down at Drouin. Hey I have lived down this way for 12 years and I never knew about it so don't feel bad!

So what is Community Radio? Well to put it simply it is a bunch of volunteers getting together to present programs that are meant to add to the lifestyle of the people they are aimed at. Now that's pretty broad and is meant to be I think. 3BBR provides lots of local content (e.g. it broadcasts the local footy finals). Community Radio is also an outlet for music that would not get played on mainstream radio. So you are a member of the Ham Radio Punk Band and want your music played you could probably find a station that would you give you an airing (not 3BBR I hasten to add!)

3BBR aim is to present family friendly programmes so you wont hear too much rap music (sorry to all you rap fans) but there is a wide variety of music on the station from jazz to techno, gospel to country and

just about everything in between. During the day they play middle of the road stuff (Music for West Gippsland) but from 6pm there is quite an interesting array of programmes run from Trad Jazz to Classics to Rock to Sports Programmes. I am hoping to be on Wednesday nights from 8pm playing music to move too (healthy lifestyle promotion etc) and ending with some relaxation music from 10 to 11pm.

To get there I have to do some training sessions. I have already got a handle on the mixing desk in the Production Studio. A variety of delivery methods are used, including CD, cassette, MD (mini disk - I had not seen these before - quite interesting!), and of course the old turntable to play those big black CD things. The next step is into the live studio, I have already sat in with a couple of the other presenters and have been made to feel very welcome. There is also some theory sessions to do but I think they are keen to fill the empty spot so I might be on air earlier than I think!

Like I said it is all voluntary, maybe you could help out at a local station -does not have to be ON AIR. The only problem I have is NOT saying VK3BBR!

Intrepid Travellers (Sorry I Forgot Last Month)

Dorothy and myself will be away on holiday from the 19.08.2006 - 18.09.2006.

Our trip will be to Alice Springs, Halls Creek, Wyndham, Kakadu, Mataranka and back to Alice Springs. From there home. We will be on the Travellers Net daily between 12.00 - 13.00 hours every day. If anyone wants to contact us, the Traveller Net is on 14,116 Mhz.

We will be on 80 metres as well. Time will be about 21.00 hours every Friday, Sunday and Wednesday. Frequency is 3,640 Mhz +/- QRM. We may hear you there.

Best 73 de Helmut VK3DHI and Dorothy



This Months Challenge

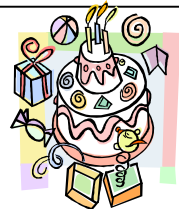
Don't have one, last month was Russ VK3MWR, apparently nobody guessed!

No the one on the left is not our trainee pom after a few beers!

Happy Birthday to you.....

Some birthdays on the club database this month :

Judy Robertson, David Rosenfield VK3ADM, James Shilton
VK3ZRG



Not listed? We don't know then, please tell us!!! Let the Treasurer know.....

Remembrance Day Contest

Remembrance Day Contest 2006
On the weekend of 12th and 13th of August, the club's station VK3BJA was once again activated for this time honoured event. At 6.00pm local time on Saturday, Albert VK3BQO, Bruno VK3BFT, Graeme VK3YCG and Mike VK3KTO were all manning VHF, UHF and HF rigs, and ready for the action that came thick and fast.

They were later joined by David VK3XMF and Paul VK3TGX. As operators gradually headed off to their warm beds, the station was kept alive by VK3KTO during the small hours. At around 7.00am VK3KTO was joined by VK3YCG and a hearty breakfast of bacon and eggs was partaken of. A little later in the morning the "Jackson Three" in the form of Diane VK3JDI, Ian VK3BUF and Ross VK3ZAP arrived, closely followed by David VK3BJV; so allowing VK3KTO to depart for some badly needed horizontal polarization. It was pleasing to note that all rigs performed without fault during the event and the club's new 6 metre antenna worked well, even at only 20 feet, although the SWR is a little high down the bottom end as to be expected, since it is really designed for the FM portion of the band. The logging program of John Drew

VK5DJ is certainly a beauty and John is to be greatly commended for making it available to all participants.

In comparison to last year the level of participation by club members was rather disappointing, but those who took part had a great time and managed to make an almost identical number of contacts on 80 and 40 metres to last year and even 10 more on 160. A breakdown of the logs is as follows.
160 metres: 44 contacts for 88 pts
80 metres: 51 contacts for 67 pts,
40 metres: 86 contacts for 86 pts,
10 metres: 4 contacts for 4 pts. 6 metres: FM 15 contacts for 18 pts, SSB 4 contacts for 5 pts. 2 metres: FM 101 contacts for 144 pts. 70 cm FM 62 contacts for 68 pts. SSB 8 contacts for 9 pts. No activity took place on 20 or 15 but four locals were worked on 10 metre SSB and FM.

The activity on VHF and UHF seemed well down on last years, perhaps due to the 2005 results fiasco. Please remember that the Remembrance Day Contest is held on the weekend closest to the 15th of August every year and let us try to make a big effort for next year.
Mike Ide VK3KTO.

CTCSS FOR IRLP IS NOW 123Hz

(Continued from page 5)

folded dipole the wires are in parallel, the current must be divided between the two wires. The current in each is half and the total power has not changed, so now the formula is $R = 100 / (.6*.6)$, which is the same as $R = 100 / .36$, which of course is 277.77 ohms, 4 times the normal dipole antenna.

So now you ask, why would anyone want an antenna with a feed point impedance of 277 ohms, my coax cable is 50 ohms!? Well let's say you wanted to feed the antenna, not with 50 ohm cable but with 300 ohm twin lead? Ah ha, now we have a decent match and a feed line that can also handle a higher SWR with low loss. You'd

probably use a tuner (ATU) in the shack to match the 50 ohm radio to the 300 ohm feed line.

You could also use the antenna on other bands with the tuner and have an efficient antenna system.

What are the drawbacks to the antenna? Well for one, the currents on each wire will begin to cancel each other out on even multiples of the *cut* frequency, so a 40 meter folded dipole should not be used on 14 MHz. On other bands even though the signal may cancel broad side to the antenna, you'll find that there is actually gain! This occurs about 45 degrees off broad side to the antenna. And this might make for interesting contacts.

**If I raise the volume on my radio, does it use more electricity?
If the professor on Gilligan's Island can make a radio out of coconut,
why can't he fix a hole in a boat?**

Van Allen Belt discoverer dies

James Van Allen, the US physicist who discovered the radiation belts surrounding the Earth, has died. He was 91. In a career that stretched over more than half a century, Van Allen designed scientific instruments for dozens of research flights, first with small rockets and balloons, and eventually with space probes that travelled to distant planets and beyond. Van Allen gained global attention in the late-1950s when instruments he designed for the first US satellite, Explorer I, discovered the bands of intense radiation that surround the Earth. These bands are now known as the Van Allen Belts. *(from WIA Website)*

Why not listen to the WIA news each week on the VK3RML repeater. It is on Sunday nights at 8pm and Wednesday 11am

Meeting Minutes

General Meeting Minutes

Date: 18th August 2006

Start time: 08:00 PM.

Location: Guide Hall Cranbourne.

Chairperson: Albert Hubbard VK3BQO

Minute Taker: David Campbell VK3XMF

Present: As per attendance sheet.

Visitors and Guests:

Apologies: Dorothy & Helmut Inhoven VK3DHI, Geoff Williams VK3ZGW, Ian Benson VK3KSZ, Phil Pavey VK3YB, Grahame Coleman VK3YCG

Correspondence Received:

Pat letter (?), VK3DWH regarding hamfest, EMDRC July & August magazine, SES Letter

Correspondence Sent: Nil tabled.

Treasurer's Report: as tabled

Income : \$2175.50 **Expenditure :** \$2170.88 **Balance :** \$5630.57

Read by: Mike Ide, VK3KTO **Moved by:** VK3KTO **Seconded by:** Russ VK3MWR **Carried:** Yes

New Call signs – Phil VK3YB has now also been allocated Peter's call VK3VB

Previous Minutes: As printed in the August GATEWAY magazine.

Business Arising from Previous Minutes:

Hamfest – Albert thanked Bruno. Gross takings \$2677.5, Expenditure \$494.95 Net \$ 2182.55

Village Green Pub Night – good night had by all

RD Contest. Those who attended had fun, but more members attending would have helped things along. 46 contacts on 160m, about 400 contacts over weekend.

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Working bee on 2nd of September. All members asked to assist with antenna work etc

KITS – CTCSS decoders in hand with Paul VK3TGX. Albert asked for interest in handsfree mic kit

30th Anniversary – ACMA will now only issue VI calls for 25, 50, 75 year celebrations.

Maryborough Trip – Dianne has booked observatory for the Sunday Shack Gear. Mike reported on donation of test equipment.

Miscellaneous Gear – mic's & speakers for sale as supplied by Richard WIA Grant – GGREC has missed out on funding from the WIA "Clubs Grant" for 2006. This was to be used for reverse cycle heating/cooling in shack

New Business:

Helmut & Dorothy away. Schedules are 1200-1300 on 14.116, 80m at 2100 Fri, Sun, Wed on 3.640 + QRM

Foundation Licence Course. First course will be 28/29th October. \$40 per person for course and pro-rata membership + book

Mystery photo in last magazine was Russ

Club Rules – please review and send amendments to Albert

Club membership list. Please advise committee of any changes.

Photos from Graeme VK3XTA have been circulated by Paul

Meeting Closed at around 09:10 PM.

Next Committee Meeting: Monday 25th October 2006, at the Club Rooms starting at 8:00pm.

Next Prac Night: Friday 6th October 2006.

Next General Meeting 20th October 2006

→
Hard at Work on the
Working Bee Day



GGREC
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CRANBOURNE
3977