B.A.R.G News

Official Newsletter of the Ballarat Amateur Radio Group Inc. # 6953T
ABN 44 247 200 143

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President: David Tilson VK3UR
Secretary: John Kennedy VK3AIG
Treasurer: Gordon Cornell VK3FGC

NEXT MEETING - FRIDAY 24, 2006

At 7.30 pm

Contacting us

You can write to the club at the address below, or e-mail the secretary.

The Secretary : B.A.R.G. Inc.
Box 1261
Mail Centre
Ballarat. Vic. 3354.

Or E-Mail: vk3aig@barg.org.au

We're on the web
www.barg.org.au

BARG Inc. Life members

Kevin Hughes	**VK3WN**
Ian McDonald	**VK3AXH**
Charlie Stewart	**VK3DCS**
Bob Terrill	**VK3BNC**
Jim Wright	**VK3CFB**
Norm D'Angri	**VK3LBA**
Phil Seddon	
Stan Widgery	**dec.**

CLUB INFORMATION

REPEATERS and BEACON

VK3RBA	(Voice)	146.750 Mhz	Mt Buninyong
VK3RWA	(Voice)	147.100 Mhz	Mt Ben Nevis
VK3RPC	(Packet)	144.750 Mhz	Mt Warrenheip
VK3RBU	(Voice)	438.475 Mhz	Mt Hollowback
VK3RMB	(Beacon)	435.535 Mhz	Mt Buninyong

IRLP Node 6310 using VK3RRWA

CLUB e-mail vk3bml@barg.org.au.

CLUB NET VK3BML 3.610+/- QRM Thursday Nights at 8 pm E.S.T (Summer & Winter)

WIA Broadcast and Club Call Back. Sunday's 11.00 via VK3RWA (IRLP Node 6310

NEWS ITEMS Send to Harry VK3KGL

Or mail to Box 1261 Mail Centre BALLARAT 3354 or e-mail **vk3kgl@barg.org.au**

Broadcast Times and Dates on VK3RWA Repeater

Every Sunday at 10.30 am, WIA National News, followed by VICLINK
Every Monday night at 9.30 pm, ARRL News
Every Tuesday night at 9.30 pm, WIA National News Repeat
Every Wednesday night at 9.30 pm, Spectrum Tasmania News

MOWING ROSTER

It is that time a gain when we publish the mowing roster for the Club rooms. The mower and fuel are at the rooms, but when the fuel is getting low please contact the committee to get a refill. Any new "mowers" will be fitted in.

Feb VK3DMK & VK3FGC
March VK3AXH & VK3TJW

Macca's Corner

Club Projects

We had around 10 members at the Monday night construction meeting where further discussions took place relating to the list circulated. It seems one of the favourites is the "Light Transmission" using high output leds. Whilst this may not be for everyone it was decided that if individual members want to undertake their own project preference from the list or any other not on the list then this should can be done at the same time.

If you do decide to do this, every assistance will be given to achieve completion and of course operation. Some of the other popular projects were the switch mode power supplies.

At the next general meeting another opportunity will be provided to express individual preferences so get your thinking caps on and speak up.

regards, Ian VK3AXH

Repeater Report

The Mt Ben Nevis 2 metre repeater project has ground to a bit of halt due to other commitments. However I understand the existing equipment is now working ok thanks to Bob VK3BNC and others. The reported interference on our 70cm repeater at Mt Hollowback seems to be somewhat intermittent. As there is little activity on this one and due to the nature of the problem it will be difficult to determine what is actually happening. I have also been speaking with one of the users and he confirms the problem does not occur on a regular basis which may indicate some type of interference rather than an equipment malfunction.

I will keep monitoring from time to time however if you use the 70cm repeater and notice the problem please send a report to me. To date I haven't heard it but is sounds like a type of background white noise.

regards, Ian VK3AXH

Propagation Report for February 2006

It seems no time since my last report. My request for members to contribute to this column again seems to have fallen on deaf ears. Maybe its just that you just don't get on the air!!!!

As I only work the higher amateur bands I can only report on them. My observations are there have been limited openings on 6 metres mainly within VK.

Some good openings have occurred on 2 metres both FM and SSB with contacts made within VK3 and to VK7, VK1, VK2, and VK5. When the band has been open attempts are made on 70cm with some successful contacts into both VK5 and VK2.

A 1296 MHz contact was made between VK2KRR at The Rock and VK3AXH with signals 5x1 both ways. Leigh was using his new 12 foot dish at only 10 feet above the ground.

I have also been advised that Bob VK3BNC has been working the satellites on 2mx and 70cm using SSB?

Why not give me a surprise and send me details of some of your contacts as I cant believe there is so little activity.

Till next time….73 VK3AXH

ADAPTING A MICROWAVE TRANSFORMER.

(assuming you can lift it)

Often accused of being a 'latter-day Luddite', I have no faith at all in a modified computer power supply being used to power an expensive Transceiver. Also I still have doubts when it comes to commercially made Switch-mode power supply. I suppose I just don't trust them as I should or so they tell me.

Someone pointed out to me that a microwave oven contains a fairly massive power transformer which should be easily 'modifiable' to a low voltage high current transformer suitable for a transceiver power supply. A friend gave me an old, no longer needed, microwave oven whilst yet another friend presented me with the transformer from such an oven. One was from an oven rated at 600 Watts whilst the second came from a 700 Watt oven.

If you look at the things carefully you will see that apart from the potentially lethal terminals/connections on the primary side (Mains), the two windings are mounted side-by-side on the centre leg of the lamination stack. If you take a hacksaw and carefully cut down the side of the high voltage winding (that is the BIG winding) you can remove one side of it and then with a hammer and drift you can drive out the remainder of the E.H.T. winding including the five or six turn winding used to supply the magnetron heater, leaving a nice neat gap separated from the mains primary winding. Cleaned up, there now remains the only "technical" part of the task. Take about 6 metres (20 feet) of hookup wire and wind through the now vacant section of the core exactly 20 turns of wire, noting that the first (or last turn) is completed by the load circuit. Twenty turns will be sufficient to determine the "turns per volt" of the transformer. If you now apply the mains to the primary winding you will be able to measure the a.c. volts developed in this tempory secondary winding. Once this is done you may like to feed that winding to a small bridge rectifier and electrolytic capacitor so that you can measure the rectified d.c. output. This should be 1.4 times the value of a.c. measured previously. The value of a.c. divided into 20 (number of turns) will now tell you the 'turns per volt' required in the transformer. In my case the 600 Watt'er was 1.4 turns per volt whilst the 700 Watt unit was 1.1 turns per volt. Now remove that tempory secondary winding.

After fitting some good paper/cardboard to cover the edges of the laminations so as to avoid damaging the enamel on the new secondary winding wire plus a couple of pieces of stout card to insert between the primary and the now to be wound secondary you are ready to proceed with the new winding.

Bearing in mind that we want high current the first though will be where do I get some 12 or 14 s.w.g. enameled wire whilst the second though is 'how do I get it fed through that gap without scratching the enamel'.

The answer is to use several strands of say 20 s.w.g. wire in parallel. Get four lengths of such wire about 5 metres long straighten them to remove any kinks and join them all together at one end. Feed some systoflex/spaghetti over the first few centimeters of the joined end and feed that through the secondary gap to provide the start of the secondary winding. From the other end of the strands feed a length of fine spaghetti over the strands and work it down to the core. If this is fed through the gap then the wire can be pulled through the gap inside the spaghetti without fear of damaging the enamel and the spaghetti then slid out of the way. Once it is through 'bed it down' to the core and move on to the next turn. It is a lot easier if you can fasten down the transformer body and get a helper to pull the wire through whilst you guide it and settle it into position. Knowing what output voltage you need, then multiply that by the 'turns per volt' figure you worked out and after adding say two turns to allow for losses wind that many turns onto the transformer core. The use of 20 s.w.g. wire will allow you to get the winding nice and neat and settled in position. Once that is done all you need to do is to clean the enamel off 'tail' and solder the strands together, covering them with some more spaghetti to provide the other end connection of the winding.

Now, so long as you can lift it, you can build it into your new power supply and there is no way that your rig will want 700 Watts at 13.5 volts, so you won't overload the transformer.
Once you have done this job you might like to carefully dismantle the magnetron and you will find two very strong magnets for the kids to play with, **BUT DON'T LET THEM BRING THE THINGS CLOSE TO THE TV OR YOUR STORED VCR TAPES.**

73 Reg VK3CAZ

STOP PRESS!

Whilst I was preparing this epistle the XYL asked me about the 'funny noise', the microwave in the kitchen was making. Investigation showed it had decided that 'enough was enough' and the magnetron had ceased to work. Went shopping and found a suitable replacement of some 30 % greater output power and very well priced (from my point of view). Got it home and on unpacking found that it was nowhere near as heavy as its predecessor although of greater power. **I SUSPECT THAT THE "DAMMED SWITCH MODE POWER SUPPLIES"** have found their way into the microwave oven area now. So if you **a)** want to try converting the transformers get one now or **b)** I now have three so you are welcome to one of them.

Beulahi`s Bluddy Beautiful Salad.

Ingredients:

¼ Cabbage, shredded
6 Spring Onions, sliced
2 packets Chicken Two Minute Noodles
5 rashers of Bacon, diced
1 packet Cashews (200 grams)
2 sticks of Celery, finely sliced

Put 2 Minute Noodles in a container and pour over 1½ cups of boiling water.
While noodles are soaking slice cabbage, celery & spring onions.
Fry bacon.
Drain noodles when soft.

Dressing

Ingredients:

3 tablespoons Sugar
¼ cup Oil
Salt & Pepper
4 tablespoons White Vinegar
2 sachets Chicken Stock Powder

Mix all ingredients together & pour over the noodles.

QST Review Feb 2006.

By Craig VK3CMC

Well the February edition of QST is again a packed edition. Just scanning the adverts causes the juices to flow seeing the range of gear that is around in the US of A. I always like to look at the **Doctors In** section first as many times there are those questions that you wanted to ask but didn't, and the answers are so easy to understand. This month it explains how to match two Yagis into a stacking array. So that the SWR is still usable at the TxRx Very simple really.
Another question concerns the old Windom off centre dipole popular f4om the 1920's before coaxial cable was popular. The debate still continues with some arguing that it is really a top loaded vertical as much as it's a horizontal antenna. Doesn't matter if it really works for you. An unbalanced ATU is required though.
Also do you want to connect multiple receivers to one antenna? Then chase up QST May 2004 pp31-38 to find out how. The Dr then discusses the matching of a linears input to a modern transceiver output and how to adjust the drive matching.

HINTS AND KINKS pp69 Has an idea for a small antenna base that can be used around the shack when experimenting with small beams etc or on field days when you need a base for that mast and the ground is rock hard solid. This idea will also allow you to mount a sun umbrella on the patio when required. The idea is to pour cement into a five gallon bucket and mount a 1.5M aluminium tube in the centre and to assist ease of carrying mount a "Stanley" chest handle onto the top with lengths of threaded rod. Very nifty idea. Telescopic sections of mast can then be added to the base unitto a suitable height. Guy wires can be utilized with a rotating ring if you require it to rotate.

HANDS ON RADIO. Experiment #37 Decoding for Display. Want to learn how the Seven segment display works? How does the BCD make the display work. Read it on pp67-68 Next month the author will build a simple linear regulator [#Exp 8] and add some extras to make a charger for gel-cell batteries.

RcoIP Remote Control over the Internet Ever thought about how to use the home station from some remote location , say while you are away on holidays etc.? read this article and and find out how to do it. Some discussions followed this very activity after the January meeting with a couple of members. Pp62-64

Transmit/Receive Switching. Read about PTT and CW Break In operation. Then see how the VOX works on the modern radio. What advantage/disadvantage id VOX to the operator. Find out about the ANTI VOX GAIN control. Pp65-66

Interested in mounting a small microwave dish on side of tower and being able to rotate it. Read article on pp42-45. It may give some new ideas.

What do you know about **Automatic Position Reporting System APRS ?**
See the article on pp 39-41. You may get enthused to try it out in the car.

Construction article for a **50Mhz linear using a 8877.** Its been designed to be light and small for field day operation.

HyGain DX-88 Vertical. Looks at some adjustments that can be done to improve performance on lower bands. Pp36
CW Telemetry for planes and Rockets. Pp28

Also the regular departments and contest information.

Don't forget the advertisements as there is enough to keep you busy until the next months QST arrives.

To secure your chance to read these QST's ask me at the next meeting and if available I will book it out to you.

Librarians Lament.

As you read this we are approaching the second month of the new year. The library has been tidied up and with new shelving its easier to store books and magazines now than before. The committee has decided that from now the club should maintain our current subscribed magazines of Amateur Radio and QST in a period of ten year succession. To this end I would like to find copies that we are missing from our files for these two magazines. Last month we listed the editions that have moved on. In future borrowings of these magazines we have placed a loan period of one month [meeting to meeting] to allow others to access them regularly. If everyone wants to read or copy an article and on a monthly basis this would take about fifty months before everyone could get a particular magazine from the library. Please consider other users and ensure you bring them back next month. If unable to attend that month could you contact someone who may be able to return them for you. Remember that after a review there may be others who want to read it as well as yourself. Apart from maintaining AR and QST in yearly sets for past ten years we do have irregular copies of QST going back to the 1950's and complete sets of Amateur Radio back to the post war period of 1948. These are available for .perusal at a club night/weekend activity at the rooms.

I am looking for some one who has recent experience in setting up a database using Microsoft XL. Could you contact me please QTHR or vk3cmc@barg.org.au

Ballarat amateur Radio Group Inc

Minutes of General Meeting January 27 2006

Meeting opened by President David @ 1935 hrs.

Apologies Vk3bvi Vk3det. Vk3hrz. Vk3ash. Vk3idl,

Welcome to visitor Doug Ellery.

Minutes of November as circulated. Moved Vk3dcs/Vk3se. Carried.
Business arising from minutes. Woolshed booked for 2006 Hamvention.
Committee determined fee structure for Foundation Licence canditates.
Vk3bvi reported white noise on 70cm repeater . Ian Vk3axh to attend.

Correspondence. In. Bank Statements. Origan Energy.QST.
Moved Vk3bnc/Vk3cfh. That correspondence be received. Carried.

Financial Statement. Ans a/cs passed. Moved Vk3fgc/Vk3kgl. Carried.

Committee report. Foundation Licence and Examination to be conducted by BARG on the weekend 4/5 February . Instruction to be provided with the help of Power point and Vk3ur. Vk3bnc Vk3axh .Vk3aig. Examiner Vk3cmc. Vk3axh to assist.
John Moyle Field Day . Club to take part. 10 members plus indicated to take part.

General Business. Request through David Vk3ur for assistance to Mat Mattson who requires an Audio amp/mic combination for wheelchair. Brian Vk3kqb to assist.

Newsletter. Well presented by Harry Vk3kgl.Please present articles to Harry for publication. Previous issues now available in library on CD.

Dining Night . Christmas BBQ a great social night . Thanks to all who helped.
Next gathering to be at Midlands Golf Club on 17 Feb.

Library. Shelving now in place . Craig Vk3cmc extends thanks to Stewart Vk3ash for his expert help.

Construction Group. Bob Vk3bnc and Harry Vk3kgl positioned new cabinet and terminated data cables for computer use.
Ian Vk3axh outlined proposed projects for coming year.
Special thanks to Geoff Vk3pap for the installation of guards on IRLP room and bench for rx/tx in radio room.

Repeater Vk3rwa Bob Vk3bnc reported that he and John Vk3cfh went to Ben Nevis and found coroded dc plug. Hope this has fixed an ongoing problem.

Steve Vk3se gave an interesting demonstration of a 2m roll up antenna .

Gordon Vk3fgc. Call books for 2006 available.

Gordon Vk3fgc . Wicen called to assist with communications in the bushfire areas of Kinglake etc.

David welcomed Bruce Vk3bmk to the meeting.

Bob Vk3bnc suggested that the Club look at obtaining a solid state rx/tx for foundation licence purposes. Committee to investigate and report back.

David Vk3ur . Changes to Licence conditions from ACMA. Across board.

Geelong Radio and Electronics Society to attend March Meeting.

Meeting closed @20.30 hrs.

List of Construction Projects and Activities for 2006

No of Interested Persons	*Project*
4	**70cm yagis**
	UHF ATV
5	**Picaxe**
	QRP Transmitters HF/VHF
	Frequency Generator
3	**Spectrum Analyser**
	2 metre quad
4	**Modulated Light Transmission**
	10Ghz Transmitters
6	**Switch Mode Power Supplies**
	Direct Conversion Tx/Rx
	Making Antenna's
	6 metres J pole
	SWR Bridge
	VHF/UHF Dummy Load
	Club Activities
	Complete Clubroom Computer wiring
	Antenna Performance Measuring Session VHF/UHF
	Presentations
	Computer Programs Explained
	Satellite Tracking
	PCB Manufacturing using CAD

President's Report:

Another busy month at BARG… Following a weekend of training congratulations to Darren Smith, Doug Ellery, Carlo Verzeletti and Ben Fulbrook who successfully passed their examinations to become our first Foundation Licence members during February. They are now in the process of establishing their radio stations, whilst checking the letterbox every day waiting for the ACMA to advise their new amateur radio callsigns.

Preparation is well underway for the John Moyle Memorial Field Day to be held over the weekend of 18th/19th March. BARG will be operating from Federation Hill, just out of Linton. The more members the merrier and if you'd like to join us, even for an hour or two, let us know at the next General Meeting.

At the January General Meeting a motion was raised to consider refurbishing the club's radio shack with modern equipment, with the aim to making the station more accessible to our members. The Committee is still preparing a proposal which should be available for review and comment during the next few weeks.

Yours in amateur radio,

David Tilson, VK3UR

March Dining Night:
The next Dining Night will be held on Friday, 17th March, commencing at 6:30PM at a venue yet to be decided. Note, this is the night before the John Moyle Field Day. Someone laughingly said that we should go to the Linton Pub, then afterwards the partners could head home, while the members headed up to Federation Hill to start setting up the field day station… Talk about keen… If you'd like to come along then please call David, **VK3UR**, on 5334-1888 AH or send an email to vk3ur@barg.org.au

FOR SALE.

BARG's committee is offering for sale three beam antennas. The details are as follows:

Item No 1. TH 3 Junior . This is in average condition and will require some work on it before it can be used.

Item No 2. This is what appears to be a modified 10m antenna and suitable for the 10metre amateur band. This may require a clean up before use.

Item No 3. This is a Werner Wolf full size 20-metre antenna. It's well made and is a good antenna for someone who has the room and suitable mast.

The above items can be inspected at the club rooms and all offers must be forwarded to the club secretary in a sealed envelope marked "Antenna Offer". These must reach the Secretary before the next committee meeting please. The highest offer may be accepted at the discression of the committee. No discussion will be entered into.