

BARG NEWS



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

VOLUME 30 ISSUE 6 JUNE 2007



President: Bob Pitcher VK3NBV
Secretary: Ian McDonald VK3AXH
Treasurer: Gordon Cornell VK3FGC

NEXT MEETING - FRIDAY 29, 2007
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: vk3bml@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	SK

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
VK3RBU-1	(APRS)	145.175 Mhz	Mt Hollowback

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

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 again 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.



QST Report with Craig, VK3CMC

Content review of current QST in library



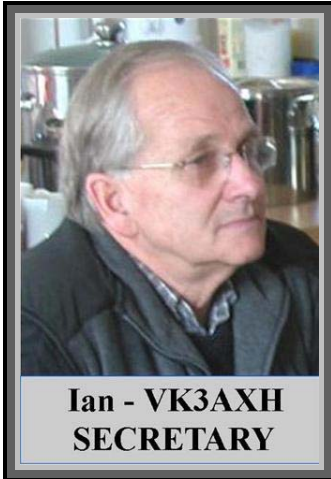
QST Review 2007 June

- P28 ESD control for the radio amateur. Strap on and earth thyself.
- P30 An Audible antenna bridge. For blind or sighted amateurs.
- P33 Learning to PIC with a PIC-EL. Part 2.
- P37 Add a 30M and 40 M dipole to your SteppIR Yagi. Costs \$60 US
- P44 Better Field day, Have a go soon.
- P47 Unidentified signals on the bands. What we CAN do about them.
- P49 Insert covering aspects of Field days.
 - Look at antennas for field days.
 - Space race. Use satellites for scoring.
 - Power sources for field days.
- P50 The Doctor is In. Talks on using old valve equipment.
 - Horizontal loop uses.
 - Astatic D-104 microphone on a IC 706PRO
- P52 Using LED as lights.
- P53 Terminating 75R 7/8" Hardline with a SO 239. Use small lengths.
- P55 Computer sound cards on different Modes.
- P 57 Measure Q with your Antenna analyser.
- P 58 Listing some simple tools for working Home projects.
- P 59 Sound cards and how to remove Hum.
- P 60 Hands on Radio Exp #53 RF Peak Detector. Roll your own.
- P 62 Hints and Kinks. Power Pole adapters, Cure Alternator whine, Protect open wire feeders from lightning.
- P 65 Review of ICOM IC-V85 2 M FM handheld.
- P 67 RF Vector VHF Direction finder system.
- P 69 Review Battery powered Soldering irons.
- P 72 Tech Correspondence. Fusing car rigs, HF band echoes and Delays.
- P 88 Old Radio: asks Why SOS?

The normal collection of contesting and other ARRL matters is present as is on P 103 HAMSPEAK, which lists some vocabulary terminology from various articles that explains for newcomers what is meant. The list is alphabetical and has a good explanation . For example Half Power Beam Width and Linear Loading are mentioned.

That's the end of this months review of QST magazine.

**73 Craig
VK3CMC**



The Secretary's Page

Minutes of BARG General Meeting May 2007

Meeting opened by VK3NBV 7:35pm

Apologies: VK3CFH, VK3CAZ, VK3SE, VK3DET, VK3WL, VK3HHJ, VK3HHK, VK3HRZ, VK3AIG, VK3IDL, VK3BNC, VK3ADX, VK3PAL

Foundation Members: Welcome extended to new calls VK3FSTU, VK3FPOL, VK3FSDH, VK3FGLD, VK3FIVE all in attendance.

Minutes of the previous General Meeting as circulated.

Business Arising – No Action re gas pipe and Silent Key Board

Moved VK3GND/VK3CMC Carried

Secretary .

Correspondance: Silent Key cards from VK3LBA, Account from VK3KQB, ReInvestment from VicState, Letter from Damascus – thanks
(Out) Card to Vk3HHK – get well

Treasurer: Current balance is \$6691.31

Moved VK3FGC/VK3ADE Carried

Reports

President Bob gave an overview of the committee meeting which included – new procedure for entry to the club rooms.

Need for a Welfare Officer to keep in touch with hams not able to attend meetings, tower mods ready for installation, sign at airport entrance seems to be done, agreed to sent club mugs to Vk3HY and Vk3XPD for their donations of equipment to club projects, dining night a success and next venue is Market Hotel.

Club register available at meetings, George Fowler auction Sunday 27th May.

Ammenities: Doug Vk3VBA reported on bus trip to Moorabbin hamfest, contact been made with Ballarat News re date error for foundation licence course and AR for date error for BARG hamvention. Due to new entry procedure to club rooms all keys to be returned, guest speaker Capt Kaylene Baird next meeting.

Education: Craig Vk3CMC reported that all 7 candidates for the Foundation Licence Course were successful and now have callsigns, some enquiries re upgrade to next level.

Technical Group

Roger Vk3ADE reported he has the new controller and exciter for the 70cm beacon and a 1296 exciter just arrived. The 50 watt base for Ben Nevis is progressing, new HF antenna's to be put on tower when wx permits and a new router to be installed by John Vk3TJW in the clubs computer system.

Computer Course

The course conducted by Roger VK3ADE was well received on its first night. Apart from some PC problems all is progressing well.

Construction Group

All the dummy loads are at various stages of construction. At our next meeting there will be some comparisons and possible calibration taking place. Brian Vk3KQB generously gave out 15 kits to make up in car constant current battery chargers suitable for charging hand held transceivers. If you have any ideas then bring them along and join in the fun.

Wicen

The Mallee Rally will take place on the weekend 10/11 June

General Business:

A number of cards have been designed by Norm VK3LBA for Silent Key purposes. The club recognizes the effort that Norm does and the cards are on display to select the most appropriate card for the clubs needs. Ian VK3AXH will contact Norm re costs etc to produce them.

The next dining night will be held at the Market Hotel on 15th June. Please let Bob VK3NBV know if you are planning to attend.

The need for a Welfare Officer was raised to keep in touch with any current or past club member that may be on the sick list or unable to get to meetings due to age/disability. A motion was then put to nominate Bob Vk3NBV to this position.

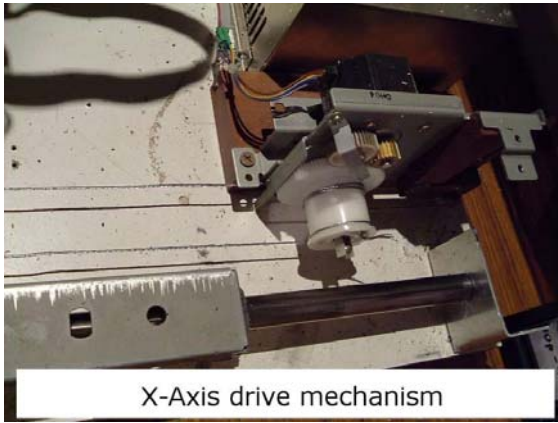
Moved VK3AXH/VK3FGC Carried

A meeting of members involved in the Damascus College activities is to be held at Gordon's place at a time to be set to further discuss a better presentation to the students.

Scott VK3FSDH has indicated he won't be at the next meeting due to commitments.

The meeting closed at 8:38pm.





The printer logic was bypassed, with the driver inputs being wired directly to the parallel port. Infrared beam sensors are used to detect the 'home' positions of each axis, so the machine can start from a known position.

Although the machine was originally only designed to drill PCBs, it can also be used to engrave aluminium and plastic, and mill shapes in plastic. However, the accuracy does suffer due to the higher loads encountered, and cutouts can only be made in many passes, cutting a fraction of a mm deeper each time. I have also successfully milled and hot-wire cut polystyrene foam, which works well due to the low

cutting forces.

I hope this article has given you an idea of the possibilities of computer control, and perhaps encouraged you to attempt a similar device. While the actual time saved by the machine may not outweigh that spent in building it, it is an interesting project in its own right. There is plenty of information available on the subject, and I recommend the following websites:

- <http://www.fullnet.com/~tomg/gooteecn.htm>
- <http://home.comcast.net/~scottxs/pcbnc/cncindex.htm>
- <http://cq.cx/pcb-router.pl>
- <http://www.majosoft.com/engraving/>
- <http://www.buildyouridea.com/cnc.html>
- <http://www.cnczone.com/>

The following points may also be of assistance if you want to build a similar machine:

- Rigidity of the structure is important. Look for printers and photocopiers with solid metal construction. The older and heavier, the better
- If constructing you own slide ways, proper alignment is necessary so that the carriage does not bind. It is easier to design in some adjustability, rather than trying to make everything 'spot-on'. Making the carriage at least as long as the distance between the rails will also help.
- At higher speeds, stepper motors will produce less torque, and may 'drop' steps, resulting in inaccurate positioning. Abrupt acceleration can also cause this. The software can be set to increase the speed gradually. More advanced driver circuits can also provide more torque at higher speed.
- If the machine is used for heavier duty milling, lead screws may be a better drive system than a cord. Precision threaded rod is available to reduce friction and backlash, but this is very expensive.

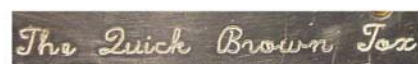
Examples of work created on the machine



Hot wire cut foam



Engraved plastic



Engraved aluminium