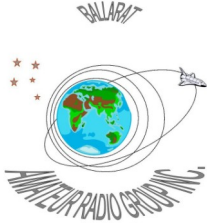


# BARG News



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

**VOLUME 34 ISSUE 5 MAY 2011**



President: Craig Cook      VK3CMC  
Secretary: Doug Ellery      VK3FDRE  
Treasurer: Bill Wells      VK3PAL

**NEXT MEETING - FRIDAY May 27, 2011**  
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](mailto:vk3bml@barg.org.au)

## BARG INC. LIFE MEMBERS

Gordon Cornell	VK3FGC
Norm D'Angri	VK3LBA
Harry Hekkema	VK3KGL
Kevin Hughes	VK3WN
Ian McDonald	VK3AXH
Phil Seddon	
Charlie Stewart	VK3DCS
Bob Terrill	VK3BNC

## CLUB INFORMATION

### REPEATERS and BEACON

VK3RWA*	(2 m Voice Repeater) ( Uses CTCSS of 91.5 Hz to access)	147.100 MHz	Mt Ben Nevis
VK3RPC	(2 m Packet Repeater)	144.750 MHz	Mt Warrenheip
VK3RBU	(70 cm Voice Repeater)	438.475 MHz	Mt Hollowback
VK3RMB	(70 cm Beacon)	432.535 MHz	Mt Buninyong
VK3RBU-1	(2 m APRS Repeater)	145.175 MHz	Mt Hollowback
VK3RBT	(2 m Voice Repeater) ( Uses CTCSS of 91.5 Hz to access)	146.650 MHz	Green Hill

\* IRLP Node 6310 using VK3RWA

**CLUB e-mail** [vk3bml@barg.org.au](mailto:vk3bml@barg.org.au).

**CLUB NET** VK3BML 3.608+/- QRM Thursday Nights at 8 pm E.S.T (Summer & Winter)

**WIA Broadcast** Sunday 11.00 am via VK3RWA (IRLP Node 6310)

**NEWS ITEMS** Send to Harry VK3KGL

Or mail to Box 1261 Mail Centre BALLARAT 3354 or e-mail membermember [member.vk3kgl@barg.org.au](mailto:member.vk3kgl@barg.org.au)

#### **Broadcast Times and Dates on VK3RWA Repeater**

**Every Sunday at 11.00 am, WIA National News.**

**Every Monday night at 9.30 pm, ARRL News**

**Every Tuesday night at 9.30 pm, WIA National News Repeat**



## QST Report with Craig, VK3CMC

Content review of current QST in library

QST Review 2011-5 May.



Here are the **Technical articles** in this months copy.

- P30 Supporting portable vertical antennas without guy wires..
- P33 A Transmitter for Fox Hunting.
- P37 Emergency Backup Solar Power system
- P41 Build a Junk Box Line Frequency Monitor. \*
- P44 Selecting the Right Antenna for your Position.
- P45 PRODUCT REVIEW: Kenwood TS-590 HF & 6Metre transceiver.  
Heil Pro Elite Headset.
- P47 Product review: Elecraft P3 panadapter;  
Uniden HomePatrol-1 Scanning receiver.
- P52 Tech Correspondence: A high power RF Sampler.  
Wireless Router Interference.  
Soldering Surface Mount components.
- P57 Short Takes: Azio KB###BM Wireless Keyboard.
- P58 Getting on Air: Folded Skeleton Sleeve Dipole for 20/40Metres. \*
- P61 Hands on Radio. Exp 100. Reviews the last 100 editions and and looks to the next 100?
- P63 Short Takes. Multimode for the iPad, iPhone and iPod Touch.
- P65 Hints & Kinks: Tool for LED insertion.  
How to store leads etal. \*  
Hose clamps. SO239 centre pin problems.

### News.

- P66 3B8EME Moonbounce from Indian Ocean.
- P70 RSQ not RST For Digital operators
- P72 Spectrum sale bill in US Congress may affect 420-470Mhz.  
Read the Editorial also about H.R.607
- P73 Amateur MF allocation a step closer.
- P76 Public Service: Amateur TV used for Fire Fighting.
- P94 Eclectic Technology: Russia says "Nyet" to Windows.  
NE555 is reinvented as ADL7555/7556.
- P95 Vintage Radio: Mary Texanna Loomis 3YA "First YL" ?
- P100 Index for May, 75. 50 and 25 years ago.
- P101 Strays: Edwin Armstrong's papers now available for research.
- P164 Index of QST Advertisers.

. Craig Cook  
VK3CMC  
May 2011



# George Fowler



# Memorial Auction

**The “George Fowler Memorial Auction”  
Will take place on Sunday 29th of May  
At the clubrooms.....  
Starting at Midday  
Auction after soups and bread rolls**

**Come along and enjoy this great day  
DON'T FORGET your junk....  
Soups and bread rolls supplied**

**DEADLINE FOR**

**JUNE 2011 EDITION**

**18 JUNE 2011**

## Using Computers with Amateur Radio

Most amateurs have a computer at their disposal either in the form of a desktop P.C. or a laptop with access to the Internet.

With such a wide variety of programs available these days amateur radio enthusiasts can download free software to do all sorts of things such as test equipment programs, radio related calculations, antenna design programs and with the use of a simple soundcard to radio interface get involved in a wide variety of digital operating modes.

Simple tools such as audio spectrum analysers, audio signal generation, antenna making programs and coaxial cable loss calculators are just a few examples of what's available.

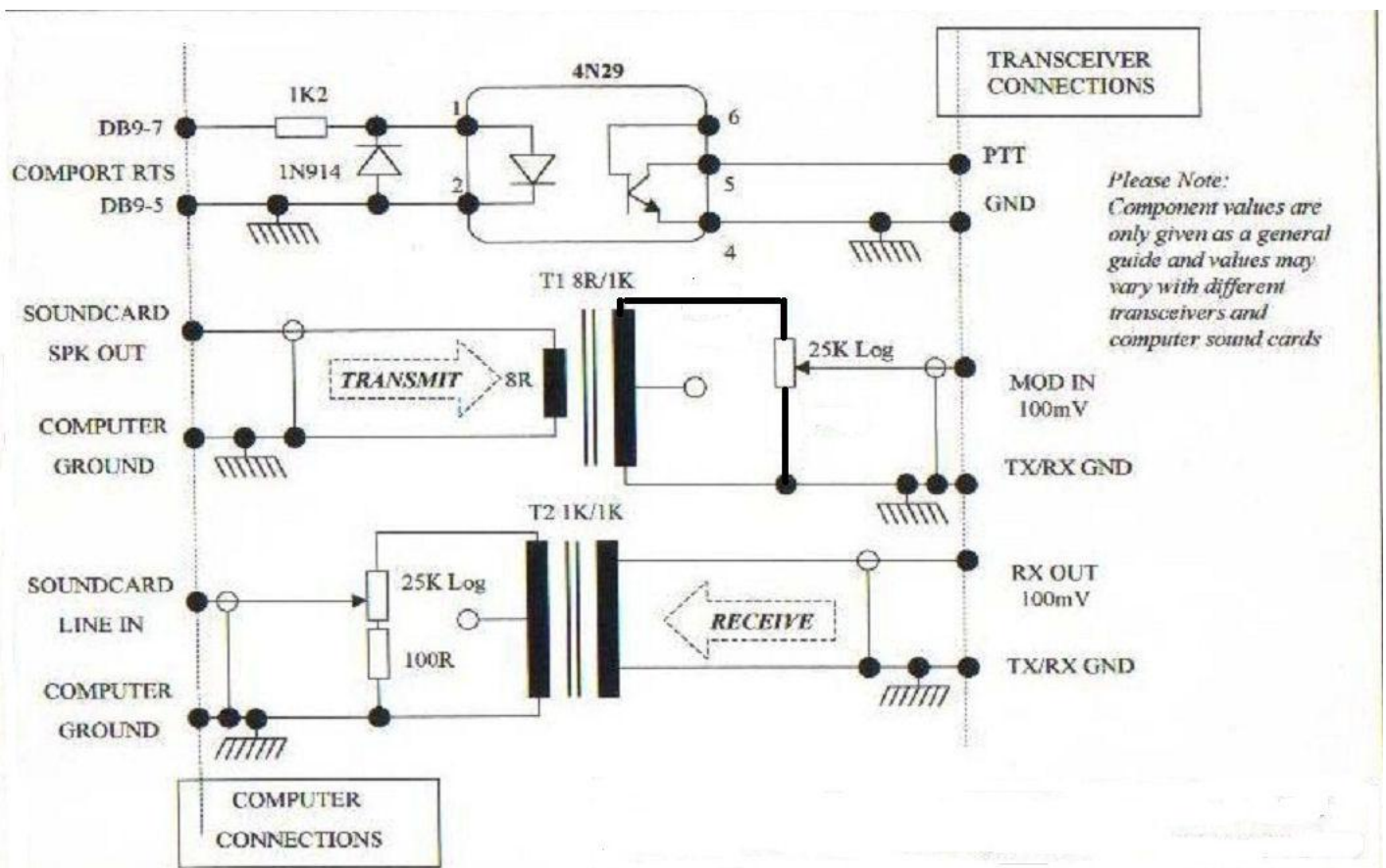
Members who attended the BARG April monthly meeting were shown a sample range of programs to perform several of the above tasks. A list of internet addresses to download some of the software is shown at the end of this article.

If you are planning to engage yourself with digital mode operation using the freely available software you will need some sort of interface between your PC and radio.

There are commercially available units to do this job with one being the popular Rig Blaster sound card interface. They are quite costly as you will see when you google this item on the internet. However if you are keen enough shown below is a simple but very effective circuit that is cheap and easy to build from readily obtainable components to join in the fun.

### Audio Interface for Digital Modes

Circuit diagram





**Below are links to a number of software programs discussed at the meeting.**

- Audio Spectrum Analysis : Spectran <http://www.sdrham.com/spectran.html>  
Audio Spectrum Analysis : Spectrum Lab <http://dl4yhf.ssl7.com/spectra1.html>  
Audio Signal Generator : <http://www.ringbell.co.uk/software/audio.htm>  
On Line Coax Cable Loss Calculator : <http://www.arrg.us/pages/Loss-Calc.htm>  
Yagi Antenna Design : <http://www.vk5dj.com/yagi.html>

**Digital Communication Programs**

- Slow Scan TV : <http://www.gooofull.com/programa/20709/mmsstv.html>  
MixW : <http://mixw.net/index.php?j=downloads>  
WSJT : <http://www.physics.princeton.edu/pulsar/K1JT/wsjt.html>

In each of the above once you get to the site select the download version to suit your computer operating version of Windows.

If you have any problems with any of the above please ask for support at the club's construction nights or get in contact with Ian -VK3AXH



**BJS**  
Ballarat Joinery Supplies

contemporary craftsmanship | traditional service

**Rob Knott**  
Director  
0417 389 356

P.O. Box 146N Ballarat VIC 3350  
**Tel** 5333 3008 **Fax** 5331 1411  
**Email** rob@ballaratjoinerysupplies.com.au  
**Web** www.ballaratjoinerysupplies.com.au

BA'S AUDIO WORKSHOP PTY. LTD. ABN 59 007 427 778  
trading as

**BALLARAT**  
AUTO SOUND SPECIALIST  
and  
Radio Communications Systems Specialists  
Supply and Service

**8 EASTWOOD ST., BALLARAT 3350**  
**Tel. 5333 4465 Fax. 5331 5851**

<p><b>HEWITT &amp; WHITTY</b> Pty. Ltd. Outdoor Power Equipment</p> <p>Cnr Carngham Road &amp; Wiltshire Lane Ballarat VIC 3350</p> <p><b>Phone:</b> (03) 5336 1344 <b>Fax:</b> (03) 5336 1027</p>	<p><b>Damien Hennessy</b> Sales / Spares <b>Mobile:</b> 0417 313 811 <b>Email:</b> damo_611@hotmail.com</p> <p><b>Allpower</b> GARDEN MACHINERY CENTRE</p>	<p><b>SupaSwift</b></p> <p><b>Ariens TIGA</b></p> <p><b>ECHO</b></p> <p><b>CHIPPER CHOPPER</b></p> <p><b>EP</b> Engineered Products Group</p> <p><b>KOHLER</b> engines</p>
--	--	--

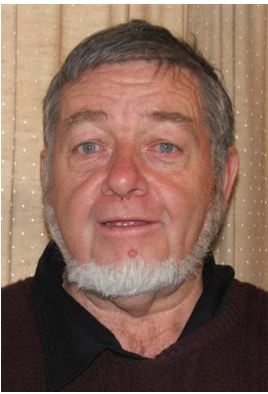
**Solutions for connecting you...**

- Ballarat's fastest broadband<sup>1</sup>
- Affordable Chatphone VoIP phone service
- Great value cable television



For commercial subscriptions call Heather James on 0427 007 893. For residential subscriptions call our Customer Service Centre on 1300 366 248.

Terms and Conditions  
Standard Neighbourhood Cable Terms and Conditions apply. <sup>1</sup>Speeds vary depending on a number of circumstances including network traffic, customer hardware, equipment and operating systems, download site traffic, download site bandwidth and size of file being downloaded.



**Craig - VK3CMC**

# *Presidents Report*

Earlier this month we celebrated Heritage week and I attended a presentation by Lorraine Branch at the Mining exchange on Henry Sutton. It was most illuminating as she unraveled some background about her great grandfather who was the son of the founder of Suttons Music Pty Ltd in Ballarat.

Henry was the second of six children and the family was educated by his mother and when he was fourteen he designed an electric dynamo that produced continuous DC. He also developed his own telephone and later had his own exchange system installed in the family shop and warehouse in 1877 which prompted Bell to visit Ballarat and see how Sutton how achieved the job. On his return to the States Bell developed and became known for this work. Henry was not recognised. !

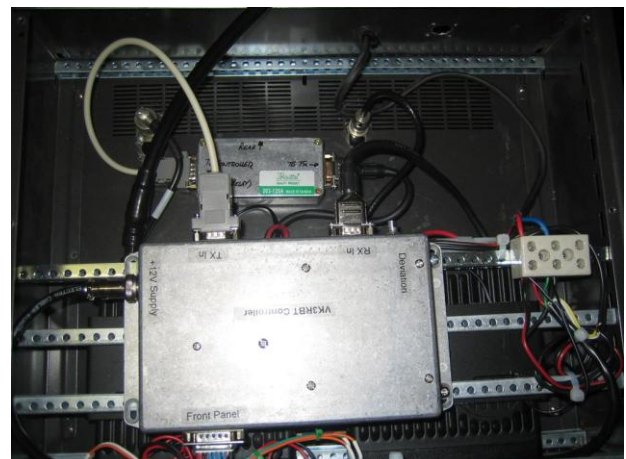
Sutton produced his own mercury vapour lamp and also a vacuum pump to evacuate the glass envelope. He had a design working for a radio transmitter and a portable receiver. His work with the former necessitating the issue of experimental licence number two.

He also produced a design for photograph images over a distance which he called the Telephane. This work utilised the Nipkow disk and also preceded the work of Baird by some thirty years. Sutton dabbled with artificial flight, an electrical storage battery and he wrote and delivered a paper to the Royal Society London. He met and also did some work with Nikola Tesla. He had an interest also in mobile transport and built and drove his own car. Photographs existed of Sutton and his wife driving the car and recently the vehicle was discovered in the Tasmanian museum. The car is currently in Ballarat. Sutton was also the motivator for the formulation of the RACV. Other activities included a torpedo design, produced a colour printing process and had a design of a carbon filament lamp which was independent of Edison, but due to the problem of distance was just sixteen days behind his announcement.

For all his interests and developments Henry Sutton did not take out many patents, and was happy to pass onto the world for sharing. What a pity because Sutton should be recognised for what he did discover and applied, rather than others who would appear to have followed up on his work.

At some stage he moved to Melbourne and settled in Malvern from where continued designing and operating his amateur radio station until he passed away at 58 years.

Henry Sutton {1856-1912} Our own Ballarat born, and first local amateur radio operator.



**Roger's, vk3ade photo's of repeater on Green Hill**



D-STAR Radios



## D-Star! To be or Not to be!

Your committee raised this question at our last Club meeting. As you are aware BARG bought a UHF 70Cm Repeater and 1296Mhz Data equipment with the intentions of establishing this equipment on Mt Buninyong. A number of factors have since changed since then along with what seems to be a lack of support Nationally for D-Star.

Before a final decision is made the committee is inviting you to consider what you feel we should do with this equipment. Our options are disposing of it or possibly installing it. An installation is a matter of finding a suitable site and if required providing suitable Internet access at a monthly monetary cost.

It seems that we have about five members that have equipment that could use the system currently if it was installed. At our last meeting a show of hands was called for to indicate who would purchase equipment if an installation was to go ahead. There were no expressions of interest.

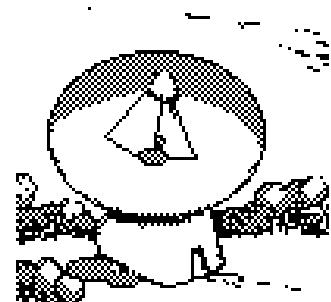
If it is decided to dispose of this equipment then according to BARG's policy it would be offered for sale to club members first by tender.

This is your equipment so we would like to hear from you if you have any constructive suggestions so whilst your thinking about it send an e-mail to Secretary Doug with your thoughts.

**Thank you, your BARG Committee.**



Bob, VK3BNC our guest speaker this month.



### **What is Radio Astronomy???**

**Bob, VK3BNC, will tell and show all about it on Friday 27<sup>th</sup> of May, next general meeting.**



**BALLARAT AMATEUR RADIO GROUP INC. REG. NO. A 0006953T**

**CLUB REGISTER AND ANNUAL SUBSCRIPTION CHECK**

NAME: \_\_\_\_\_ MOBILE PHONE: \_\_\_\_\_

CALL SIGN: \_\_\_\_\_ EMAIL ADDRESS: \_\_\_\_\_

STREET: \_\_\_\_\_ WIA MEMBER?: YES  OR NO

SUBURB/TOWN: \_\_\_\_\_ PARTNER'S NAME: \_\_\_\_\_

POSTCODE: \_\_\_\_\_ SUBSCRIPTION PAID: \$ \_\_\_\_\_

WORK PHONE: \_\_\_\_\_ RECEIPT NO: \_\_\_\_\_

HOME PHONE: \_\_\_\_\_ RECEIPT DATE: \_\_\_\_\_

If the Club decides to publish a Club Directory,  
are you willing to have the above information included? YES  OR NO

SIGNATURE: \_\_\_\_\_ DATE SIGNED: \_\_\_\_\_

---

**BALLARAT AMATEUR RADIO GROUP INC. REG. NO. A 0006953T**

**CLUB REGISTER AND ANNUAL SUBSCRIPTION CHECK**

NAME: \_\_\_\_\_ MOBILE PHONE: \_\_\_\_\_

CALL SIGN: \_\_\_\_\_ EMAIL ADDRESS: \_\_\_\_\_

STREET: \_\_\_\_\_ WIA MEMBER?: YES  OR NO

SUBURB/TOWN: \_\_\_\_\_ PARTNER'S NAME: \_\_\_\_\_

POSTCODE: \_\_\_\_\_ SUBSCRIPTION PAID: \$ \_\_\_\_\_

WORK PHONE: \_\_\_\_\_ RECEIPT NO: \_\_\_\_\_

HOME PHONE: \_\_\_\_\_ RECEIPT DATE: \_\_\_\_\_

If the Club decides to publish a Club Directory,  
are you willing to have the above information included? YES  OR NO

SIGNATURE: \_\_\_\_\_ DATE SIGNED: \_\_\_\_\_