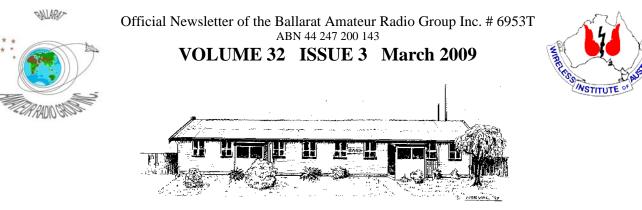
BARG News



President:	Doug Raper	VK3VBA
Secretary:	Doug Ellery	VK3FDRE
Treasurer:	Peter Pollard	VK3FPOL

NEXT MEETING - FRIDAY March 27, 2009 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.	We're on the web www.barg.org.au
Or E-Mail:	vk3bml@barg.org.au	
Ian M Charl Bob T Jim V Norm Phil S Stan	BARG Inc. Life membersn HughesVK3WNIcDonaldVK3AXHlie StewartVK3DCSFerrillVK3BNCVrightSKn D'AngriVK3LBASeddonSkWidgerySKon CornellVK3FGC	

CLUB INFORMATION

REPEATERS and BEACON

D-STAR

CALLSIGN:	MODE:	FREQUENCY:	TX OFFSET:	USER SETTINGS
VK3RBA A	Digital Data	1298.700 MHz	Nil (half duplex)	URCALL: VK3RBA RPT1: VK3RBA A RPT2: not in use
VK3RBA B	Digital Voice	439.9875 MHz	-5.0 MHz	URCALL: CQCQCQ RPT!: VK3RBA B RPT2: not in use

VK3RBA (UHF)	(70 cm Voice Repeater (Uses CTCSS of 91.5 Hz to access)	439.275 Mhz	Mt Buninyong
VK3RBA (VHF)	(2 m Voice Repeater)	146.750 Mhz	Mt Buninyong
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

* IRLP Node 6310 using VK3RWA

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

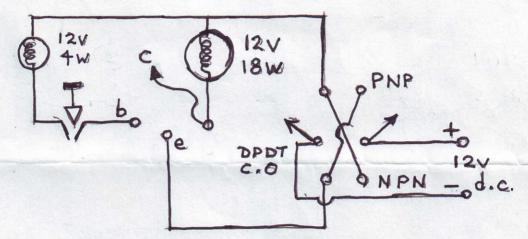
Or mail to Box 1261 Mail Centre BALLARAT 3354 or e-mail vk3kgl@barg.org.au

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Broadcast Times and Dates on VK3RWA Repeater	
Every Sunday at 11.00 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	Å.
Every Wednesday night at 9.30 pm, Spectrum Tasmania News	٠
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SORTING OUT TRANSISTORS - REG, VK3CAZ

Tidying up in the shack the other day I realised that I had jars and containers of TO3 type power transistors intended for power supplies but did not know how or if they worked. It's not much use trying to test them using the transistor test function on the average Digital Multimeter since it only applies very small currents to the transistor and in the case of 2N3055 transistors and the like it is not enough to really turn the component on hard as is required in a power supply unit.

So I decided to "knock up" the circuit shown here and found to my delight that it did the job well.



It worked so well that I built it up properly (which is unusual for me) and put it into a box as a permanent piece of test equipment.

The lamp in the base circuit is a 300 mA globe whilst the Collector circuit uses an 18 Watt 'flasher globe'.

I managed to find a TO3 socket and mounted that on the box with a "flying lead" terminated in a "croc clip" to make the connection to the collector.

As a a final touch I fitted a 'double-pole changeover switch" to reverse the polarity of the 12 volts applied to the circuit so that PNP as well as NPN transistors can be checked.

After fitting the transistor into the socket a 'push' on the Ib button forward biases the Base-emitter junction on and the device passes about 300 mA. Then connecting the 'flying lead' to the collector will, if the device is serviceable light the Ic lamp, which should go out when the 'Ib' button is released. As long as the device behaves as I have suggested it can be assumed to be serviceable





Presidents Report

Doug, VK3VBA

The calendar year is flying by, March has gone now looking at April.

A lot was achieved in March although the Group did not participate in the John Moyle other things were done, booking venue for hamvention, putting repeater back on Ben Nevis, bus to EMDRC and a lot of people looking at instruction manuals of radios on how to program CTTS to access Ben Nevis.

A lot of work was done behind the scenes without the knowledge of some members but its all good fun.

A very good attendance was recorded at our construction night Brian vk3kqb gave a lecture on the use of oscilloscopes and what they can do for you in the shack, many thanks Brian.

Call books will be available at our March meeting.

A request for trestle tables to be available for our Hamvention in October so if any members can help please speak to a member of the hamvention committee it would be greatly appreciated.

That's all from me see you at the next meeting 27-03-09

Doug vk3vba

Two old radio hams sitting in the park

One said to the other me missus said what are you doing

He said nuthin

She said that's what you were doing yesterday

He said I haven't finished doing it yet



Repeater Tone Access.

I have been asked to summarise the use of **tone access** on the Ben Nevis repeater and its relationship to **CTCSS**.

Strictly speaking Ben Nevis has a **tone access** requirement and in order to open the mute and key the repeater a sub audible tone of 91.5Hz must be included on the caller's transmission, without the tone present it is impossible to key the repeater.

Once the repeater is keyed the 91.5Hz tone must be maintained for the duration of the transmission or the repeater will de-key.

The WIA has recommended two frequencies for tone access for repeaters around Australia, the primary is 123.0Hz and the alternative is 91.5Hz. Because VK3RGL at Mount Anarchy and VK3RBA the Mount Buninyong UHF repeater use 91.5Hz we decided to use the alternative frequency of 91.5Hz.

Any of the older rigs that are modified to produce tone access could then find use across all of the currently tone access equipped repeaters in the Western region.

Why did we decide to modify the Ben Nevis repeater and include the requirement for tone access?

I think most VK3RWA users would be aware that prior to the modifications we had some problems with the repeater.

- The repeater was being keyed by a very low level, intermittent signal from some unknown device in its coverage area. I think this has been a long standing problem and goes back to the previous incarnation of the repeater.
- 2. The interference was compounded by an internal fault in the 'noise rectifier' of the repeaters receiver that once keyed on the interference kept it keyed for extended periods, this was not evident on normal voice transmissions, this fault has been rectified.
- 3. We regularly experienced interference from the users of the Bass Hill repeater in Gippsland, several times a day we would hear one way conversations through the repeater. If the Bass Hill repeater ever incorporates tone access then it will more than likely use 123.0Hz as the access tone to ensure we do not revert to the original problem.
- 4. On a note that has nothing to do with **tone access**, users will have noticed a 'crackling' in the transmitted signal from Ben Nevis when the wind gets to a reasonable speed. This has been an ongoing problem for a long time. In an attempt to isolate this problem a separate and temporary receive antenna has been installed at the site. The original antenna is now only used for transmission.

There has been a lot of reference to **CTCSS**; a full implementation of **CTCSS** on the repeater has **NOT** been implemented. As a rule of thumb **tone access** is used on the <u>repeater input</u> and **CTCSS** is used on the <u>output</u>.

CTCSS or **Continuous Tone Coded Squelch System** is used control the users receiver mute level, if the correct sub audible tone is present then the receiver mute will open otherwise it will stay closed. There is a sub audible tone on the output of VK3RWA but it has been configured to track the input signal. No tone is transmitted on the repeater tail or during CW identification, the sub audible tone of 91.5HZ on the repeater output and is present only to assist with the control of the IRLP link back to the BARG clubrooms.

If you have an older rig then that does not support **tone access** of repeaters then all is not lost, there will be some discussion of your options at the next general meeting as well as the possibility of assembling some modules to supply the tones during the regular construction nights. The ideal situation will be to produce a module that is switchable between 123.0 Hz and 91.5 Hz, note, there is no need to switch the module off on when using repeaters that do not have **CTCSS** or **tone access**.

A further question has been put as to where users can get the latest repeater information including settings for **CTCSS** and **tone access**. The WIA maintains a very up to date list of repeaters on their web site and this can be down loaded as a 'pdf' file. The correct URL is,

http://www.wia.org.au/members/repeaters/data/documents/Repeater%20Directory%20090 314.pdf

For those that do not have internet access, just remember that there are a number of computers at the BARG club rooms that have internet access and also a printer attached, if you need help then just ask, we have a large base of members who can help.

We hope this answers some of the questions around the changes at Ben Nevis and undoubtedly you will see more repeaters following the same path as the community generated interference increases and repeater density also increases.

Regards - Roger VK3ADE.





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