

**MEETINGS, NETS and SERVICES****Club Station:** VK4WIS**Club Repeaters:**

Bald Knob: VK4RSC on 146.850 MHz &amp; 438.075 MHz.

Luguna Lookout: VK4RMB on 146.825 MHz &amp; 438.175 MHz

91.5 Hz CTCSS

Dulong: VK4RSN on 53.700 MHz

Gympie: Private repeater on 147.975 MHz

**General Meeting:** Monthly on the first Tuesday at 7:30 pm in the Club House, old Toll Plaza building, 85 Godfreys Road, Bli Bli.

Visitors are welcome to attend.

**Weekday Meeting:** Weekly at 10:00 am—2:00 pm on Wednesday.**Sunday Meeting:** 3rd Sunday of each month at 10:00—2:00 pm.**Good Morning Net:** Daily at 8.15 am at VK4RSC on 146.850 MHz.

Conducted by various club members.

**Tech Net:** Weekly at 8:30 pm Sunday at VK4RSC on 146.850 MHz.

Check in, raise topics and ask your technical questions.

**80 m Net:** Weekly at 7:30 pm Thursday on 3660 kHz.**10 m Net:** Weekly at 8:15 pm Wednesday on 28.470 MHz USB.**6 m Net:** Weekly at 7:30 pm Friday at VK4RSN on 53.700 MHz.**2 m Net:** Weekly at 7:30 pm Sunday on 144.300 MHz USB.**2 m Net:** Weekly at 7:30 pm Monday on 147.975 MHz.

Conducted by club station VK4WIS.

**QNEWS:** Relayed Sunday at 9:00 am at VK4RSC on 146.850 MHz.

After the broadcast a callback is conducted by VK4WIS.

**Internet:** [www.vk4wis.org](http://www.vk4wis.org)

This website provides previous issues of Pelican Droppings in full colour in pdf format which can be downloaded.

The current issue can be had by subscribing to the email edition in pdf format. Apply to SCARC.

**EchoLink:** Available on VK4RSC 146.850 MHz.

The Internet station is VK4WIS-R and the node is #316084.

# Pelican Droppings

Newsletter of the Sunshine Coast Amateur Radio Club Inc.

Issue No.94

April-May 2008

**INSIDE**

SCARC Calendar of Events—2008	Page 4
Keeping safe with generators & starting batteries	Page 6
Improving VHF performance	Page 8
Maleny is Different—a ballad by Harvey Wickes	Page 10
John Moyle Field Day 2008	Page 11
Equipment Review—Quansheng 70cm FM Handheld	Page 14

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**NEXT ISSUE**

The new radios for the WICEN caravan.

**SCARC Inc. Office Bearers AGM March 2007**

President	Noel Des Jardins VK4NL
Vice-President	Harvey Wickes VK4AHW
Secretary	Gordon Taylor VK4VP
Treasurer	Keith Noll VK4AKA
Committee	Ray Stuart VK4YRS; Frank Winter VK4BLF; Mike Little VK4YFL; Richard Philp VK4YRP

Copy deadline: 3rd Tuesday of the month preceding GM issue.

Email editor: [gcombes4@bigpond.com](mailto:gcombes4@bigpond.com)



## Presidential Preamble

The year is getting away again with lots happening at the club. Inclement weather held up repeater activities. I have been busy trying to drum up sponsorship and helping with club activities - Contests and Kirkleigh weekend for example.

The March AGM was a ripper; many club members turned up for the election of the new club management. At the end of nights all sitting members were re-elected with one exception - Frank Winter VK4BLF was voted Vice President. Congratulations to the new committee and I look forward to working with them for the next year.

Our annual John Moyle Field Day contest held on the 15th and 16th of March at Howells Knob near Maleny was a success. It rained through the night and early morning bringing with it fog. Thanks for those that sent photos of the weekend, some of which are shown elsewhere in this issue. Lets hope they encourage others to join in next year. A special thanks to Bernie VK4KAC for organising the weekend. Operators were Noel VK4NL, Bernard VK4KAC, Harry VK4TK, Richard VK4YRP, Harvey VK4AHW, VK4ALH and VK4TLA, Leicester VK4TLA. Let's see if we could double the list for next year's John Moyle. Thanks to Bill VK4XZ for the help in setting up. We also welcomed many visitors over the hectic contest weekend. Caterers for Saturday night were Trevor and Mike VK4YFL on the barbie. Dave VK4HFW and his wife Barbara brought the tucker and red wine: the latter delayed me a little in returning to the job at hand.

The Kirkleigh meet at Somerset Dam attracted a large gathering of amateurs and their families from several radio clubs in the region. It was held over the weekend of April 5-6. Thanks to the Dalby boys for the tremendous effort with bookings and organising the show. A special thanks to Reg VK4AQU and wife Beth for the marquee and for the raffle conducted by Neil VK4NF and wife Judy. Rick VK4NRL and others arranged the Saturday night BBQ. There were many who suggested we have other meets of the Kirkleigh kind.

Front piece photo: President Noel VK4NL and Gordon VK4VP and family at rest inside the Howell's Knob rotunda.



would be very valuable to anyone who has a problem with their vision. The display can be configured to show the Channel number, the VFO frequency or VFO plus channel, but it is seven-segment only, not alpha-numeric. The keyboard does not sound DTMF tones for IRLP / Echolink access.

The frequency range is 420 – 450 MHz and the power output is between 4 and 5 watts on high power, depending on the frequency, or 1 watt on low power. There are 99 memories and each can store receiving frequency, transmitting frequency and CTCSS frequency (if required). The scan feature will scan continuously in VFO mode or through the programmed memory channels. The manual is written in “Chinglish” and needs some careful thought to interpret!

I believe that the circuit is based on a Kenwood design and the high quality audio, both on transmit and receive supports this. In all I am very happy with the quality, sensitivity and performance of the radio and believe that it is very good value for \$99.00 delivered. I bought mine from VK6, see [www.hamshack.com.au](http://www.hamshack.com.au) End

## Equipment Review

### Quansheng TG-45AT handheld 70cm FM Transceiver

by Tony Thorrold VK4KKY

I recently bought one of these inexpensive little transceivers and have found it to be an excellent performer, although it lacks one or two features which would be useful.

It is palm-sized, conventional in layout, comfortable to hold, measuring 55 x 115 x 40 mm including knob and battery pack and weighs 270 grams. The rubber duckie antenna is 160 mm long. The unit is supplied complete with a belt clip and a drop-in battery charger. The NiMH battery pack is rated 7.2 volts 1100 mAh, sufficient for 40 minutes transmitting, 40 minutes receiving and six hours standby per charge according to the manual.

The LCD display lights up bright green for a few seconds whenever a button is pressed and is clear and easy to read. A female voice announces what you have done every time you complete an action, eg "Power on" when you switch on. I soon disabled her, but she



We've named another event October Camp Catch Up, and we are looking a five places on either 10/11/12 or 24/25/26 of October 2008. If anyone has a suggestion please let me know and I will add them to the list.

The regular Wednesday meeting continues at full steam. Dennis VK4FDEC and his crew overcame the problem of mould in the dungeon (toll plaza underground walkway which we use as a storage area). Wayne VK4WS and his merry band of helpers dismantled a satellite dish from down the road and brought it back to the club-rooms. Robert VK4FVMP is doing a terrific job keeping the club-rooms mown and clean; we thank him. Our own Geoff VK4GWC deserves top marks for delivering Pelican Droppings to the club members at regular intervals (even if not on schedule - Ed.). If you have a story please contact him via his email address on the back page. He also needs someone to regularly up-date the back page club information.

Wazzer VK4NW and wife Trish are having a splendid holiday overseas but not without a few health hiccups.

Vin VK4FVCW headed off for surgery and we wish him all the best in the recovery process. Our thoughts are with you and your wife Jan and family.

Keith VK4AKA has been working hard on repeater matters including the VK4WIS web site. Check it out yourself.

Sick Call: Angus VK4QV, Errol VK4ZHL, Ruth VK4HEY, Vin VK4FVCW, Arthur VK4SQ and Bernard VK4KAC.

Please welcome new members Greg Wier VK4FGDW, Tony Halter VK4TLA, Leicester Hibbert VK4ALH,

Time to leave you all in peace. Noel VK4NL

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### SCARC Calendar of events 2008

May 6 Club Meeting  
 May 10 Barcfest at Mt Gravatt Showgrounds - carpooling to be organised  
 May 20 Exec meeting  
 June 20,21,22 Rally Qld (Gary Bonnor VK4ZGB)  
 July 4 Winter HASH NIGHT 6-9 pm friday night) at Dave Robertson VK4JMR 32 Quambi Place, BUDERIM  
 July 13 Noosa Endura Bike Ride  
 August 16 HAM COOKOUT 4.30-8 pm saturday evening (location to be advised)  
 Sept 13 Sunfest at Woombye Hall  
 Oct 3 Spring HASH NIGHT 6-9 pm (friday night) at Harvey Wickes VK4AHW's QTH Buderim  
 Oct 24, 25, 26 Inter-club CAMP with HAM COOKOUT on site Saturday 25 (Mystery Location to be advised)  
 Dec 2 Meeting and Christmas BBQ  
 Jan 9 Summer HASH NIGHT 6-9 pm (friday night) at Geoff Sanders VK4KEL's QTH Chevallum  
 Jan 9 Summer HASH NIGHT 6-9 pm (Friday night)

Social notes : HAMS AT SOMEONE'S HOUSE Seasonal HASH night (unplug your radios and enjoy a someone else's cooking) BBQ, seats, music, etc. provided.

Bring a bowl of main course or dessert to share with others. Friday nights for your xyl, family and friends to unwind from the week with good cooking and good company.

Drinks are fine to bring along BYO or to share.

HAM COOKOUTS - fire up your mobile/portable radios, the fox-hunt gear and our BBQ late Saturday afternoon at outdoor site to be advised.

Bring along your family and kids or grandkids to see what we get up to.

Inter-Club Camp - with Dalby group (et al) as per Kirkleigh format.

Richard VK4YRP operating inside but on-site



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Above: Assembly at Howell's Knob with the WICEN caravan  
 Below: A Green Tree Snake joins the operating team



**Bart and Cheryl Derlagen**



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## Keeping Safe with Generators and Starting Batteries

by Bill Booth VK4BBX

Condensed from an article by Clarence Williams KD1PN

I have heard about generator starting batteries blowing up a few times, but I recently had a personal experience with just such an event. I hope that my experience can serve as a cautionary tale, saving you from the loss of your eyesight. Your hearing or even your life.

I work for a cellular phone provider in north Florida. As part of my responsibilities, I maintain 46 sites. I have opened up the doors of several generators to find the starting batteries split open, with pieces of the batteries strewn throughout the cabinet. In the past, I usually blamed this on lightning damage, but recently found out what really happened.

### First Personal Experience

On August 31m 2006, I was at a site performing my monthly generator inspection. This included starting and exercising the generator assembly, listening for unusual sounds and taking meter readings. After checking the oil and cooling water levels and looking the machine over, I changed the control panel from automatic to manual. I then flipped the START switch, expecting to hear the generator roar to life. Instead, I experienced the detonation if what amounts to a miniature hydrogen bomb.

As I write this some two months later, I have still not regained my hearing fully. I was very fortunate that the large diesel engine was located between the battery and my body, since flying acid could have caused many burns, as well as possibly resulting in the loss of my eyesight.

I learned that a Ham friend of mine here in Florida had the very same experience. I think it's time to warn others who may be using a backup generator.

### The Cause of the Problem

Battery chargers on some generators are of the brute force type. Unlike smart chargers that reduce charging current as the battery voltage increases. Some generators will keep charging the battery even after it reaches its fully charged float level.

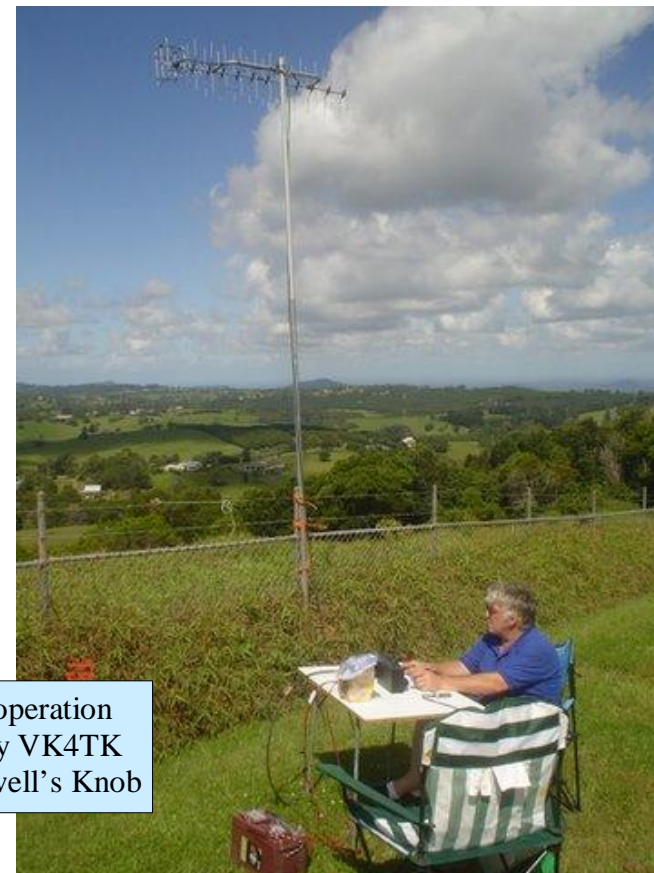
- Overcharging causes the acid solution to separate into hydrogen and oxygen gases, which are released to the atmosphere.

## John Moyle Field Day

15—16 March 2008 at Howell's Knob

Harvey VK4AHW: It was a great weekend for the John Moyle Field Day Contest, up at Howell's Knob. Thanks to all those who helped out, giving numbers from home and so on. It was good to see so many club members and their families pop in to our site from time to time over the weekend. Most of them would have driven through the charming town of Maleny on the way up.

Noel VK4NL: At Howell's Knob, where the wind howls; Bernie is a one man giant. He did well. I was helping Harvey put up his 6m beam and I spotted the tree snake on the fence enjoying the sunshine; the wind was blowing the poor thing off the fence. End



70 cm operation  
by Harry VK4TK  
from Howell's Knob

### Maleny is Different

Folks who call Maleny home are mostly very Green,  
They all decried the Woolworths site as something quite obscene.

Obi-Obi's Platipii it seems were all in peril,  
And all the town was up in arms, from Country Gent to Feral.

"I won't shop there" the stickers say, on every local bumper,  
And all agree that Woolies can just shove it up their jumper.

We'll all support our Co-Op; yes, the good old IGA.  
'Cos money spent at that locale comes back to us next day.

As I drove through this lovely town, just doing forty K,  
I spotted my mate Richard, and I thought I'd say G'day.  
I gave the horn two little beeps, and waved in his direction,  
And then I gave young Wynn a beep, (so deep in introspection.)

She told me later on that day what one dear lady said,  
Scowling as I drove away and nodding with her head,  
"I never thought I'd see the like! No, not even maybe,  
A dreadful burst of "Road Rage"... and right here in Maleny"!

by Harvey Wickes VK4AHW (every word is true folks)



After perhaps a month or two, if the electrolyte is not refilled, much of the solution may be boiled away, leaving a more explosive mixture than a liquid solution.

- If the automatic (or manual) start is initiated, there is a demand for a very high initial current (about 300 to 400 A in good weather, up to 600 to 800 A in cold climates) to crank the motor from a dead stop to spinning fast enough to start. This results in considerable heat generated inside the battery, with oxygen, hydrogen and heat – and finally an explosion.
- The electrolyte solution normally acts as a coolant inside the battery. The loss of water thus exacerbates the problem when the inside of the battery gets hot.

#### My Recommended Solution

1. Wear eye and ear protection
2. Before cranking, always switch the generator out of automatic operation so it won't start before you are ready in the event of a power failure.
3. Examine the electrolyte level in every battery, and if needed, fill to the proper level with distilled water.
4. Check oil and coolant levels.
5. Start the generator from a safe distance, if possible, while facing away from it.

Reference: "How to keep that generator battery from blowing up in your face", Clarence (Barney) Williams, KDIPN

[Editor's postscript: Early in May this year a boat exploded at its moorings killing two people and injuring and burning (from the consequential fire) others on board at the time. The explosion - a detonation evident by the destruction caused - occurred when the engine was started by switching on the starting motor. The craft had been refitted recently and this starting may have been the first since then. It would be interesting to know from the coroner's findings whether the explosion was from fuel vapour or hydrogen. If diesel fuel was used then a detonation would be unlikely. H and HC vapours have an explosive range. If the concentration of vapour in air is outside the explosive range then a detonation will not occur; rather the vapour ignites causing a fire and a mild explosion (of expanding gases from initial combustion). Hydrogen is more likely to detonate than petrol vapour and not much is needed to cause severe damage.] End.

## Improving VHF performance

by Tony Thorrold VK4KKY

An absolutely sure way of improving the performance of your VHF transceiver is to install a 20-element Yagi atop a 30 m tower and buy a 250 watt amplifier. Unfortunately this is only a dream for most of us and a nightmare for some XYLs! But there are some things that we can do to improve VHF performance. The three points we will examine in this article are: Make sure that

- the antenna is working to its full potential
- the maximum signal is reaching the antenna
- the transceiver is producing a strong, clean signal.

The principle of the 30 m tower is a good one – get your antenna as high as possible in your circumstances. The range of a VHF signal is about line-of-sight plus a little. Over sea water, ‘a little’ is 20% and an easy formula which I remember is:

$$\text{Range in nautical miles} = \sqrt{2r} + \sqrt{2t}$$

where a nautical mile is about two kilometres, r and t are the heights of the receiving and transmitting antennas in feet above sea level. Over land it not quite as straightforward because of inconvenient things like mountains and trees, but the principle still applies – the higher, the farther.

If we take a quarter-wave vertical whip antenna as the reference, it is easily possible to get a useful gain (certainly 3dB or more) by using a half- or five-eighth wavelength vertical. Double the radiated power helps! If you don't need omnidirectional radiation, you can use a small Yagi, even indoors, to get 6 or 8 dB gain which makes a huge difference if you are using low power.

Getting the signal from the transceiver to the antenna is a very important link in the chain. RG-58 coaxial cable attenuates a VHF signal by about 20 dB per hundred metres. 20 dB means 100 times. Only one hundredth of the power of your transceiver will reach the antenna! So it is important to use the best cable for VHF frequencies (and even more so for UHF). RG-213 has an attenuation factor of about 9 dB per 100 meters at VHF frequencies. Don't have a big coil of coax behind the radio because you bought more than you needed, cut off any excess within reason. Every metre of unnecessary cable wastes power. When used outdoors, choose a cable with good quality insulation for both the outer jacket and the dielectric so that it does

not absorb water. Water in the dielectric makes a huge difference to the efficiency of the cable. I once worked on a yacht's VHF radio where I found water dripping from the PL259 plug behind the set. It had entered the coax at the top of the mast and wicked all the way down to the nav station. Where the coax joins the antenna, make sure the joint is sound and well waterproofed with self-amalgamating tape or compound and that the cable is mechanically supported, not hanging from the plug. Use a single length of coax if possible as every joint introduces a loss of about 1 dB. Every 3 dB of loss halves the power.

Use adequately sized wire to feed 13.8-volt power from the supply to the transceiver. If the wire is too thin, there will be a significant volt drop when transmitting and your ‘high power’ will not be as high as you thought! Low voltage can also cause distortion. If the display on your radio dims when you press the PTT button, check the wire size. Remember, the current rating written in catalogues and on drums of wire is a maximum rating to prevent the wire from melting or catching alight, it does not mean it is suitable to feed that many amps to a load. The longer the wire, the thicker it must be to counter volt drop. If in doubt, measure the voltage at the radio on standby and then when transmitting at maximum power – there should be less than 1 volt difference. Another cause of volt drop can be a high resistance or corroded joint in the supply wire.

By optimising the antenna, using good quality, dry coax and ensuring a stable power supply you'll get the best possible performance from your rig. End

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