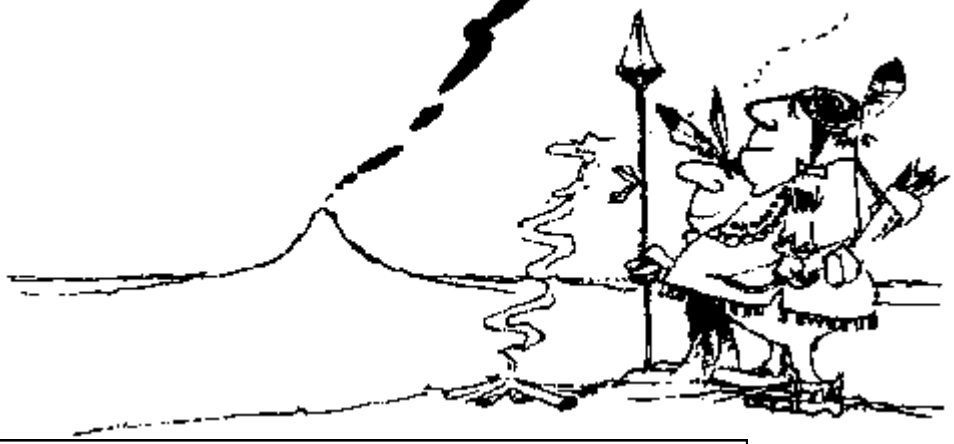
April 2010

Volume 38 - Number 04

SMOKE SIGNALS



Official Newsletter of the

CENTRAL COAST AMATEUR RADIO CLUB Inc...

Postal address: PO Box 238 Gosford NSW 2250

Clubrooms & Station: Dandaloo Street, KARIONG NSW Phone: 02 43402500

Club Call-signs: VK2AFY, VK2EH

Repeaters: VHF - 146.725 CTCSS 91.5 Hz VK2RAG
UHF - 438.075 CTCSS 91.5 Hz (IRLP node: 6060) VK2RAG
UHF - 439.300 Voice Multimode VK2RTG

Morse (CW): 439.725

APRS: 145.175 - VK2AFY, VK2RAG

D-Star: 146.63750 MHz -0.600 Offset (Usually "C" Node) VK2RAG
438.32500 MHz -5.400 Offset (Usually "B" Node) VK2RAG
Gateway Registration URL https://122.252.16.155/Dstar.do

Home Page: **www.ccarc.org.au**

A Reminder.

As our usual Business Meeting falls on Good Friday, 2nd April, the next Business Meeting will be held on

Friday 9th April 2010 at 1930 hours.

Wishing all members a happy Easter.

Smoke Signals, Published by:
Central Coast Amateur Radio Club Inc.
PO Box 238 Gosford NSW 2250
Phone: +61 (02) 4340 2500
Dandaloo St. Kariong
Editor: Leonie VK2LCP

Contributions

Information to be included in "Smoke Signals" must be submitted to the Editor by the second week in the month preceding publication. Information must be it writing, and in MS-WORD or RTF format. You can hand the information to the Editor at the club meetings or via email (preferred method) to **smokesignalseditor@fsparker.com.au.**

No information can be taken via telephone.

Central Coast Amateur Radio Club is affiliated with the Wireless Institute of Australia and Amateur Radio NSW.

Management Committee 2009-2010

Executive

President	Col	VK2ZCO	4324 5576
colhodg@comcen.com.au			
Vice President	Geoff	VK2ZC	4362 9444
geoff.parker@gsparker.com			
Secretary	Greg	VK2GRJ	4329 0614
greg.james@internode.on.net			
Treasurer	Ray	VK2HAY	4325 2182
rtooby@bigpond.com			

Committee

Bruce	VK2ZAD	John	VK2DBC
Don	VK2ZCZ	Leon	VK2BLV
Fred	VK2FSP	Doug	VK2FDCC
Bob	VK2ZAR	Chris	VK2LOB
Greg	VK2NGE	Victor	VK2BTV

Sub Committee Chairpersons

Amateur Television	Victor	VK2BTV
Callbacks	Fred	VK2FSP
Constitution	John	VK2DBC
Deceased Estate	Bruce	VK2ZAD
D-Star Facilitator	Chris	VK2LOB
Education	Chris	VK2LOB
Field Day	Col	VK2ZCO
Lecture Co-ordinator	Fred	VK2FSP
Library	Victor	VK2BTV
Project & Development	Bruce	VK2ZAD
Property	Ray	VK2HAY
Publicity	Doug	VK2FDCC
Repeater	Don	VK2ZCZ
Smoke Signals	Leonie	VK2LCP
Social Co-ordinator	Doug	VK2FDCC
Station Officer	Leon	VK2BLV
WICEN Liaison	Bob	VK2ZAR
Webmaster	Greg	VK2NGE

Repeaters **VK2RAG** (Site: Somersby. 300 Metres ASL)

VHF (time out 3 Min)	146.725 MHz - CTCSS 91.5 Hz
UHF (time out 3 Min)	438.075 MHz- CTCSS 91.5 Hz
	IRLP 6060
Morse Practice	439.725 MHz- CTCSS 91.5 Hz
Packet CCOAST	44.136.16.14
1200 bps	439.150/434.150 MHz Duplex
APRS	145.175MHz
Non Linked UHF voice	439.950 (under construction)
D-Star	146.6375 MHz (Usually "C" Node)
	438.3250 MHz (Usually "B" Node)
Gateway Registration	https://122.252.16.155/Dstar.do

Repeaters **VK2RTG** (site: KARIONG, 150 Metres ASL)

ATV	
Vision Carrier	In 1250 MHz Out 444.250 MHz
Sound Carrier	In 6.8 MHz +/- 75 KHz
	Polarity Horizontal
Multimode	439.300/434.300 MHz Duplex,

VK2AFY (site: KARIONG)

APRS	145.175 MHz

Senior Members

Bill Aulsebrook	VK2SUB	Fred Parker	VK2FSP
Paul Clutter	VK2SPC	Leonie Parker	VK2LCP
Ursula Barker	XYL-VK2BTV	Ray Richards	VK2BRR
Ed Dyring	VK2ED		
Dot Crutcher	XYL-VK2ZCZ	Dot Skinner	XYL-VK2ARI
Bruce Holland	V2ZAD	Ivan Skinner	VK2ARI
Dick Maitland	VK2BBK	Alan Swan	
Kevin Outlen	VK2ANT	Kevan Weaber	VK2AJV

Honorary Members

Tom Burt	VK2TB	Greg James	VK2GRJ
Ken Kirkby	VK2XAL	Peter Mudie	VK2XZP

Life Members

George Collie	VK2ZDC	Ray Tooby	VK2HAY
Ross Mudie	VK2ZRQ	Col Hodgson	VK2ZCO
Don Crutcher	VK2ZCZ	Bob Ridgley	VK2ZAR
Victor Barker	VK2BTV	Leon Brett	VK2BLV

President's Report

With great relief I report that Field Day 2010 has passed successfully with an attendance of around 1400 persons.

The day began early for many CCARC workers, actually on site before sunrise.

Many Traders, Exhibitors and Flea Marketeers also began their set up early and all were in readiness when the trading area was opened for business at 0900 hrs.

My thanks are extended to all 52 workers on the day (club members, friends and family) and to the FD Committee members for their efforts over several months.

The FD debrief was held on Friday 19 March with a lower than expected attendance, perhaps members do not realise the intense annual effort required to present a successful FD.

One suggestion presented at that meeting pointed to the necessity of "understudies" to the more critical committee positions in training for future field days. This suggestion can be extended to club executive and committee positions.

Last week the HF Beam antenna caused some concern, we suspected an open circuit connection at the beam. There is a moral to this story, make sure the system is being checked at the correct frequency !!! Enough Said.

Two club groups entered the recent John Moyle Field Day Comp. One group as a portable operation under the callsign VK2EH; the other group at the clubhouse under the callsign VK2AFY.

The clubhouse group operated the previously mentioned beam, without fault, obtaining around 500 contacts. No word yet from the portable group.

We are still trying to ascertain the level of use of our packet and APRS systems before final decisions are made re their continuation.

I must conclude this note here and return to many projects placed on hold while Field Day preparations were underway.

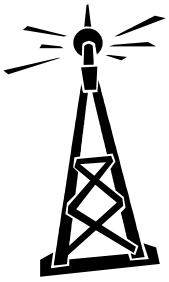
Cheers One and All,

Col

VK2ZCO

NEW MEMBER

A membership application has been received from Mark Regan VK2ZB of Toronto.
The application has been considered by the Committee and is supported.
The application will be considered at the April 2010 meeting.
Greg James VK2GRJ
Secretary



Repeater Report

Kariong Repeater 9300 and Packet Rack.

The 9300 repeater has been removed for repairs and modifications to install CTCSS encode and decode to assist with the Echolink no ident forwarding and hopefully, reduce the interference that has plagued the repeater over the last few years.

The repeater is to be relocated in the ATV / Repeater room at Kariong as the existing rack was deemed to be in a location that obstructed access into the operating room.

On inspection of the rack, the APRS and all the VHF Packet equipment (Radio's and TNC's) appear to have been disconnected and not working, only the 439.150 link is operational, we think.

The APRS if rebuilt will also be relocated to the ATV / Repeater room.

The Club needs to decide if the Packet system is to be re established and if so a volunteer to build and maintain it is required.

At last Tuesday night's group meeting, new + 12 volt power wiring was run from the Batteries to the Repeater Rack to allow for the increased power requirements for the 9300 and other planned repeaters.

Don Crutcher VK2ZCZ
Repeater Chairman CCARC Inc.

Amateur Radio Licence Education

Education weekend to be held on Saturday 17th and Sunday 18th April 2010

There will be a Foundation course and assessments.

Also Standard and Advanced assessments.

Foundation course will commence at 8am on Saturday 17th April

For information please contact
Chris Lobb vk2crs@gmail.com
or phone 0428 239 413

WICEN Annual General Meeting

2.00 p.m. Saturday 10th April 2010

Held at CCARC Club rooms

Field Day Photos — *Col VK2ZCO*

Interested Crowd checking out the "goodies" at the Traders' Tables

Early Flea Market

Jaycar

Tea & Coffee ladies

Dinner Crowd Saturday evening

The John Moyle Contest

20 – 21 March 2010

Whilst this contest should normally be a “Field Trip” in portable mode, the usual suspects turned out at the CCARC clubhouse for what became a fun weekend. After the initial rush of setting up we were off and running, making our first noise at about 12:10 hours on the 40 metre band.

The calls flowed thick and fast in the initial fury with fresh voices and minds on the job resulting in good numbers and signal reports from competing stations.

Working in to the late afternoon was a good turnover of help arriving to relieve the strained voices and strained logging fingers of the first shift.

And special thanks must go to one seemingly tireless voice which sounded rather like VK2CRS and who managed to maintain his momentum almost with the simplicity of a single button press. HI HI!

Consumption of the club obligatory chocolate Paddle Pops, coffee, tea and soft refreshments served as fuel, oooer, and took us into the evening after which VK2FULL produced a healthy dinner of party pies, sausage rolls and pasties, more oooer, but which were really yummy in the tummy! Thanks Bob!

As the human power supplies failed many helpers faded away into the night leaving Chris to maintain a vigil through to morning and we thank him for that. Pete VK2TPT returned in the morning with a somewhat fresh but hoarse voice to maintain the rage.

In all it was a great time and whilst it can be a bit tiring and hard on the voice it is a worthwhile cause in bringing Amateur Radio operators together.

We ultimately finished up with approximately 500 calls and our thanks go to those stations for their response and well wishes for our strong signal and high numbers.

And our congratulations should also go to those stations who managed the 800 to 900 calls with their sterling effort.

Well, what about next year? We have had roughly the same team operating for the last 3 years in the “home” club environment so let’s try and make that push and get out into the bush on a mountain top somewhere in what is usually ideal camping weather at this time of year. We will need to start organising late this year but it should be worth it. So, let’s do it!!!

In closing I wish to confirm thanks to all that helped out and, in particular, Chris VK2CRS, whose usual drive and dedication to a task has, again, helped the club maintain a strong activity presence on the VK landscape.

73 de Pete
VK2TPT

— Photo by Col VK2ZCO

Thank You

A big thank you to all who manned the entrance gate, starting a 0430 hours on Sunday, especially, Helen & Peter Tooby (non members), Bob Fitzgerald, and the 1st. Berkeley Vale Scouters, who did great work during the morning.

The Club thanks the team who manned our Treasury, and the many people who handled our Raffle.

Robyn Brett & Helen Collie and Leon Brett at Treasury, Ann Hodgson and her two daughters, and June Ridgley, plus a large number of ticket sellers helped make the Raffle a success.

With the great effort by the volunteers lead by members Ganga Faber and Leonie Parker, plus Ursula Barker and her friends the free "tea & coffee" counter was a "big hit" with all of our patrons at the Field Day

A Brief Introduction into the Uses of Tone Squelch Systems

CTCSS TONE HISTORY

Continuous Tone Coded Squelch System or CTCSS for short is a system that has its origins in the early 1950's - introduced by Motorola and then adopted by most manufacturers of FM radio equipment.

The use of CTCSS is mainly used to provide protection to the repeaters' receiver, by not using the squelch signal to active the transmitter, as the output from the CTCSS decoder circuit provides this function. This prevents the spurious noise bursts that appear – (especially on high RF density sites) which is where most repeaters are located.

Its original application was to allow individual companies to have their own repeater on the same frequency as other companies in the same or similar coverage area. In these cases the RF frequency, as well as the CTCSS frequency, is co-ordinated by a frequency assigning organization or company. It can also be used to provide basic segregation of different user groups utilizing the same repeater. This feature is typically called busy channel lockout, where only the users with the same CTCSS tone can transmit when the channel is active. All other users are locked out until the repeater is dormant.

CTCSS IN AMATEUR RADIO

In Amateur radio the term of `tone' and `tone squelch' appears to be the common terminology used by most equipment suppliers.

The use of tone only settings is the most common setting used in Australia, as this places a tone frequency signal on the transmitter allowing access to repeaters that require it. The use of tone squelch will only work if the repeater you are using provides a tone signal on its transmitter.

Note: most repeaters will not pass the sub-audible tone from receiver to transmitter, it is usually filtered out.

In Australia various tone frequencies have been used or changed over time for all different reasons. On 70CM, the introduction of LIPD devices with a default tone of 123 Hz and some wide band wireless audio headphones having audio frequency components that extend in the 67 to 250 Hz spectrum have created problems in some areas causing repeater operators to change CTCSS frequencies.

In 2009 it was discussed at a repeater builders meeting in Sydney, that 91.5 Hz be used as a national standard as it was already in use in Queensland, ACT and parts of Victoria.

A recent count shows that nationally there are 14 repeaters using 123.0 Hz and 14 using 91.5 Hz in the 2m Band with 70cm very similar, 'with 23 using 123.0 Hz and 28 using 91.5 Hz.

IS A NATIONAL SINGLE TONE THE BEST APPROACH?

The use of a single CTCSS or national standard is under utilizing the capability of CTCSS. For example, if two repeaters on the same frequency say (Newcastle and South Coast) using 146.975 MHz on the odd occasions with coastal inversions, mobiles can access both systems usually with a weak signal of the annoying nature into one of the repeaters. Now if each repeater where assigned an **individual CTCSS access tone** these situations can be controlled with the mobile or base user selecting which repeater he or she wishes to talk through.

The old excuse of older radios `is a bit worn out' when there are projects and pcbs from numerous clubs available to retrofit to these radios.

CENTRAL COAST AND THE HUNTER

Most NSW repeaters that have CTCSS access used 123 Hz. The Central Coast Amateur Radio Club have changed from 123 Hz to 91.5 Hz with their repeaters requiring tone to access them as standard, in some instances the 146.725 MHz repeater can have a carrier access receiver remotely activated as required, but be aware that the sensitivity of this receive is poor in comparison to the tone access one.

The CCARC 70cm repeaters all require 91.5 Hz CTCSS tone to access them.

— continued on next page

A Brief Introduction into the Uses of Tone Squelch Systems — *continued from previous page*

With the recent bursts of noise on the Westlake's 146.775 MHz repeater driving listeners to reach for the on/off switch, a new receiver has been built for the repeater with the following features:

(i) Carrier access with normal squelch settings with a typical signal required of 0.4uV

(ii) Carrier access with a tight mute setting requiring 2uV

(iii) 91.5Hz tone access that requires only 0.1uV to open the repeater

The repeater can operate in carrier and tone access simultaneously or can have the carrier access disabled and switched from high or low squelch remotely.

It is recommended when using the Westlake's 146.775 MHz and the Central Coast's 146.725 MHz repeaters that you use the tone setting of 91.5 Hz please program your radio accordingly.

Driving up or down the F3 is not the time to try and change tone settings on your radio.

Currently the Westlake's Mount Arthur repeater on 146.875 MHz has 123 Hz as its access tone. It has 114.8 Hz tone on its transmitter, to allow users to program their radios with different tones on receive and transmit. (most amateur products do not have this capability, but some commercial two way radios, including Philips, AWA, Motorola and Midland, provide this feature). The other reason for a different CTCSS tone on the transmitter is to prevent its own receiver from hearing any CTCSS tone and locking the repeater up in a loop.

There is a low level intermod between two commercial VHF services that are 600 KHz apart. When mixed with the repeaters transmitter, a signal is generated on the repeaters receive frequency. While this is normally just below mute opening point, it can at times manage to un-mute the receiver.

A perfect use for CTCSS decodes to mask a problem.

One use of the 114.8 Hz repeater tone is to mute out the Sydney northern beaches repeater on the same frequency.

The tone access frequency for 146.875 MHz is currently waiting for components to allow a change to 91.5 Hz, more news when this happens.

In some cases the repeaters can and will have CTCSS tones on their output, for example during broadcasts and special events used for signaling controls at other receivers for special applications.

Peter Sturt VK2ZTV
Feb/March 2010
For Westlakes Amateur Radio Club and Central Coast Amateur Radio Club Monthly Magazines.

WIA NEWS — Wireless Institute of Australia - http://www.wia.org.au

WIA Centenary Convention in Canberra

Don't miss your opportunity for a once in a lifetime opportunity to see the inner workings of the Black Mountain Communications Tower at the WIA Centenary Convention in Canberra.
http://www.wia.org.au/newsevents/news/2010/20100314-2/index.php

Neil Penfold State AR Centre Opening

An estimated crowd of 150 people traveled from metropolitan Perth and from country locations as far away as Kalgoorlie to attend the official opening today of the Neil Penfold State Amateur Radio Centre at Whiteman Park.
http://www.wia.org.au/newsevents/news/2010/20100314-1/index.php

High praise for Radio Club de Chile (RCCH)

As parts of earthquake-hit Chile again this week were shaken by severe aftershocks there has been further news of the role of radio amateurs, including them being a highly sought after reliable source of information.
http://www.wia.org.au/newsevents/news/2010/20100313-1/index.php

The Amateur's Code

The Radio Amateur is:

Considerate

never knowingly operates in such a way as to lessen the pleasure of others.

Loyal

offers loyalty, encouragement and support to other amateurs, local clubs, and the American Radio Relay League, through which Amateur Radio in the United States is represented nationally and internationally.

Progressive

with knowledge abreast of science, a well built and efficient station and operation above reproach.

Friendly

slow and patient operating when requested; friendly advice and counsel to the beginner; kindly assistance, cooperation and consideration for the interests of others. These are the hallmarks of the amateur spirit.

Balanced

radio is an avocation, never interfering with duties owed to family, job, school or community.

Patriotic

station and skill always ready for service to country and community.

Note:The original Amateur's Code was written by Paul M. Segal, W9EEA, in 1928.

With only a few word changes, the Code can be applied to Australia

[I know we printed this "Amateur's Code" last year but I think it is worth repeating, especially as I needed an article to fill this page. Please send your contributions to ***... ... ...*** *The Ed.]*