

AMATEUR RADIO & BUSHWALKING



Thankyou for allowing us to give this short presentation on the hobby of amateur radio & its association with your hobby of bushwalking.

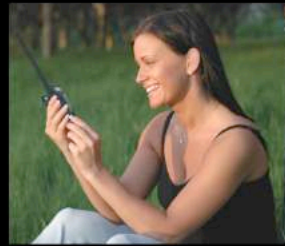
Also with me tonight is

David, VK5KC, President of the Adelaide Hills Amateur Radio Society.

John, VK5BJE

What is amateur radio ?

- Multi faceted hobby
- 3 million people worldwide
- Communicate –
transmitting voice, Morse
Code, digital modes,
pictures, video signals.
- Private recreation/non-
commercial



Amateur radio is many different things to the individual three million plus people throughout the world who enjoy this multi-faceted communications hobby. Amateurs communicate with each other by transmitting voice, Morse code, digital modes, pictures and even video signals. It is a private recreational hobby and is non commercial.

Is it similar to CB radio ?



One of the most common responses when you tell somebody you're a radio amateur, is "is that like CB?". To which the answer is "yes and no".

Yes -- because they both involve two way communication.

But, to explain the "No", there are many more differences than similarities.

There are issues of more privileges for ham radio operators, e.g. more power, more bands.

Strict licencing.

Ham radio is also polite radio, without the crude and foul language of CB, probably due in large part to its licensing requirements.

Popular image of amateur radio



The image of Amateur radio has long since transcended the 'older' bearded individual who sits in a room filled with big black boxes full of glass tubes glowing in the dark while talking to people in a strange language.

The sound of strange beeps from a brass key used to complete this picture.

While this can still be seen, a brave new world of Amateur Radio has now emerged.

Today's Amateur Radio is a world of modern communication and experimentation and in Australia has had a new lease of life since the regulations were changed in 2005 to remove Morse code and create the new "Foundation License".

Since then, the hobby has been rejuvenated and has been taken up by many young people, including children and others who in the past would never have been able to participate.

Demographics.

- 1,296,000 – Japan (1 % of the population)
- 739,000 – USA
- 75,300 - Germany
- 59,000 - UK
- 15,330 – Australia
- 6,000 – South Africa



About 3,000 million amateurs around the world

Famous amateurs

- Dick Smith
- Chet Atkins
- Walter Cronkite
- Joe Walsh
- Feargal Sharkey



There have been many 'famous' amateur radio operators over the years.

Dick Smith – Australian entrepreneur, businessman, aviator.

Joe Walsh – the band The Eagles

Feargal Sharkey – Irish singer from the 1980's

Andy Thomas

Walter Cronkite – American broadcast journalist (now passed away).

Former King Hussein of Jordan

Yuri Gagarin – Russian cosmonaut

King of Morocco and the King of Thailand



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How did the term 'Ham radio' originate ?

- In 1908 three Harvard Wireless members – Albert Hyman, Bob Almy, & Peggie Murray, created the acronym from their last names
- Hertz, Armstrong, & Marconi
- Amateurs in the early days causing interference



There are various theories as to how the term 'Ham' came about. But no-one is really sure of the true origins of the term.

They include.....

1. In 1908 three operators from the USA created the acronym from their last names
2. It is sometimes claimed that HAM came from the first letter from the last names of three radio pioneers: Heinrich Rudolf Hertz, Edwin Armstrong, and Guglielmo Marconi. However this cannot be the source of the term as Armstrong was an unknown college student when the term first appeared at the turn of the 1900's.
3. The term "ham operator" was commonly applied by 19th century landline telegraphers to an operator with poor skills. 'Ham' was also in more general use as a slang word, meaning 'incompetent'. In the very early days of amateur radio, two amateurs, working each other across town, could effectively jam all the other operations in the area. Frustrated commercial operators would refer to the ham radio interference by calling them "hams." Amateurs, possibly unfamiliar with the real meaning of the term, picked it up and applied it to themselves.

History of amateur radio

- 1886.....Heinrich Hertz proved the existence of radio waves
- 1899..... Guglielmo Marconi sends a wireless message across the English Channel.
- 1901..... Marconi communicated across the Atlantic
- 1910.....first ? radio society formed - Wireless Institute of Australia (WIA)



The birth of amateur radio in general is mostly associated with various amateur experimenters.

History of amateur radio

- 1911.....27 experimental licences in Australia
- 1917.....World War One
- 1919.....Amateur service restarted
- 1920.....Numerical prefixes for each State of Australia
- 1923.....1st contact between UK & USA.
- 1938.....amateur radio ceases in Australia – WW2



1911 - 27 experimental licences in existence in Australia. NSW - 22, Vic, 3, SA - 1, Tas - 1.

1917 – World War One puts a stop to amateur radio

1919 – the amateur radio service recommenced.

1920 - Numerical prefixes allocated for each state

1923 - the first two way contact between the UK and USA was in December 1923, between London and Connecticut.

1938 - 3rd September, Robert Menzies informed all Australian amateurs by telegram that amateur radio in Australia had officially ceased to exist. Amateurs were directed to go QRT and dismantle all equipment, and to notify the Senior radio Inspector when this order had been carried out.

History of amateur radio

- 1945.....amateur activity resumes.
- 1947 - VK5KL (South Australia) has a 2-way contact with W7ACS/KH6 in Hawaii, a distance of about 9000km.
- 1975 – Novice licence introduced
- 2004.....Morse code removed
- 2005.....Advances & Standard licence
- 2006.....Foundation licence
- 2013.....North Korea



1945 – end of WW2 hostilities, amateur radio recommenced.

1947, South Australian operator VK5KL made contact with a station in Hawaii, a distance of about 9,000 kms.

1975 – Novice licenece was introduced (introductory licence)

2004 – The Australian Communications & Media Authority (ACMA) removes Morse as a requirement for amateur licences

2005 - The ACMA creates two licence classes, Advanced and Standard.

2006 - The ACMA adds the Foundation licence to the list of available classes.

Amateurs with these licences have callsigns with the prefix VK#F, eg VK4F

2013 – North Korea is now the only country in the world which does not allow amateur operation

Fr. Maximilian Kolbe



Getting a licence in Australia

- Restructured in 2006.
- Three levels
 - Foundation.
 - 2 day course
 - Basic electronics
 - Practical
 - Standard.
 - Advanced.
- Morse Code
 - no longer compulsory



The licencing system in Australia was remodelled in 2006. There are now three levels of licence in Australia: Foundation, Standard, Advanced. Morse Code (or CW) is no longer a compulsory component. The new Foundation Licence has provided the opportunity for people from all walks of life technical and non-technical to join in the hobby.

What can you do ?

- Work DX (overseas)
- Amateur radio satellites
- Contests
- Slow Scan Television (image mode)
- Fox hunting
- Remote Island Operations (IOTA)
- Digital modes
- Summits on the Air (SOTA)
- Portable operation



DX – telegraphic short hand for ‘distance’ or ‘distant’.

Satellites - There are several small satellites orbiting the earth. These satellites permit communications by morse code, voice, or packet radio, over large distances using line-of-sight frequencies in the VHF and UHF spectrum.

Contests

SSTV – amateurs swap colour pictures to each other around the world. The pictures are not moving, but rather a series of stills - like a slide show.

Fox hunting - Also known as hidden transmitter hunts, fox hunting tests the skills of its participants by requiring the competitors to locate a hidden transmitter in some defined area. Using directional antennas and other direction-finding equipment, you can find the direction the transmitted signal is coming from.

Islands on the Air

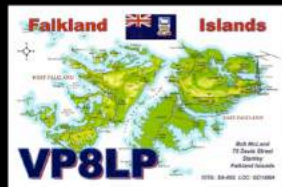
Digital modes – mention John VK5BJE

Summits on the Air

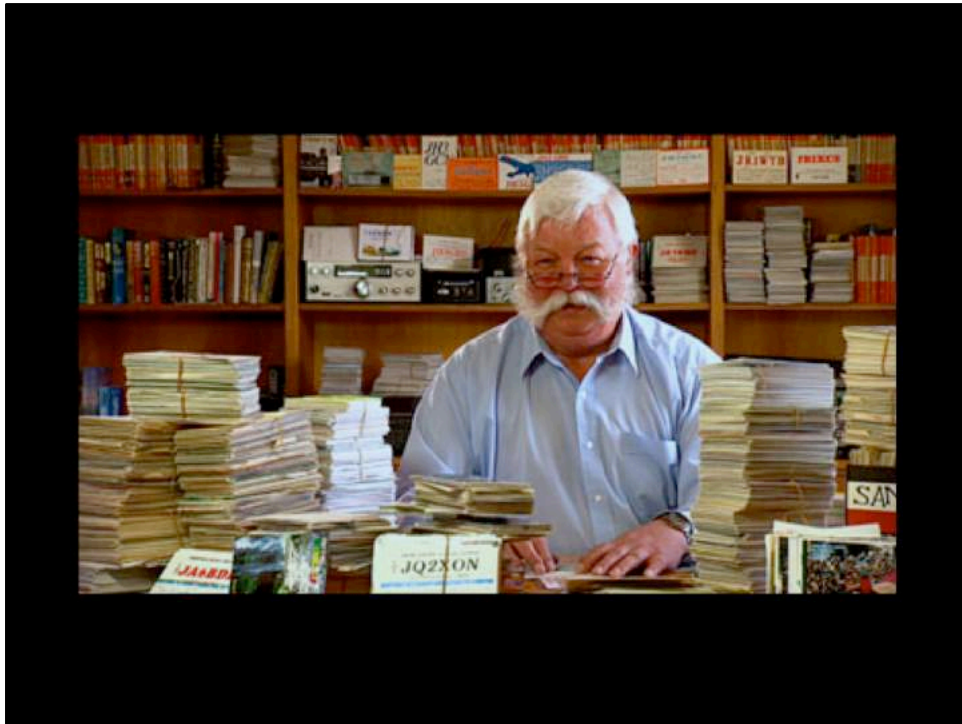
Portable operation

QSL cards

- Written confirmation of a 2 way communication between 2 amateur radio stations.







Martin Luther, VK7GN
Appeared on the ABC TV show 'The Collectors' in July, 2011.

Awards



Awards, usually in the form of certificates, are offered by the WIA and by many Australian radio clubs, to amateurs who have made contact with a given number of stations in a certain geographical region (for example, a state or continent). The best known and most respected award is probably the DX Century Club award, or DXCC. This recognises the achievement of contacting stations in one hundred different countries.

Contests



Contesting is a popular activity amongst many radio amateurs. Various contests are held throughout the year, with the aim of promoting communications using a particular mode or band, or with a specific group of amateurs. The usual aim of a contest is to make contact with as many stations as possible, in the allocated time. Some contests attract thousands of hams from all over the world, all trying to log brief contacts with each other.

In times of emergency..... “when all else fails”.

- Crisis & natural disasters.
- Other forms of communication fail.
- Valuable resource



In times of crisis and natural disasters, amateur radio is often used as a means of emergency communication when landline phone, mobile phones and other conventional means of communications fail.

Unlike commercial systems, Amateur radio is dispersed throughout the community and is not dependent on terrestrial facilities that can fail or be overloaded, such as mobile phone base sites or satellite communications links.

Radio Amateurs worldwide provide a valuable resource to Emergency Services and Aid Organisations in times of need, either by providing the extra manpower required to cope with extended operations at emergency communications centres, or by providing facilities in the field (equipment and infrastructure including amateur VHF and UHF repeater systems etc.) when all else fails.



It is a tradition in Australia for radio amateurs to provide communications for the benefit of the community. Emergency communications using Amateur Radio first occurred during the 1939 Black Friday bushfire disaster. Other major occasions include Cyclone Tracy 1974, Ash Wednesday bushfires 1983, the Newcastle Earthquake 1989, and the Black Saturday disaster in February 2009 in the State of Victoria with its more than 30 bushfires claiming 173 lives and destroying more 2,000 homes wiping out entire towns.

More recently radio amateur repeater facilities were used for emergency service communications during the Queensland floods in January 2011

Only last week radio amateurs planned a pivotal role in the search for a missing man in the Blue Mountains in NSW.

Equipment



There is a wide range of equipment.
How big is your budget ?



A little compact low power transceiver (can be built as a kit)







A simple wire dipole.
Cost about \$40.00
Or very easy to build.

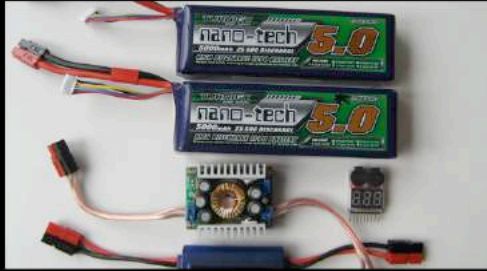


Portable equipment

- Radio.....1.17 kgs.
- Antenna.....390 grams.
- Telescopic Squid pole.



Portable equipment

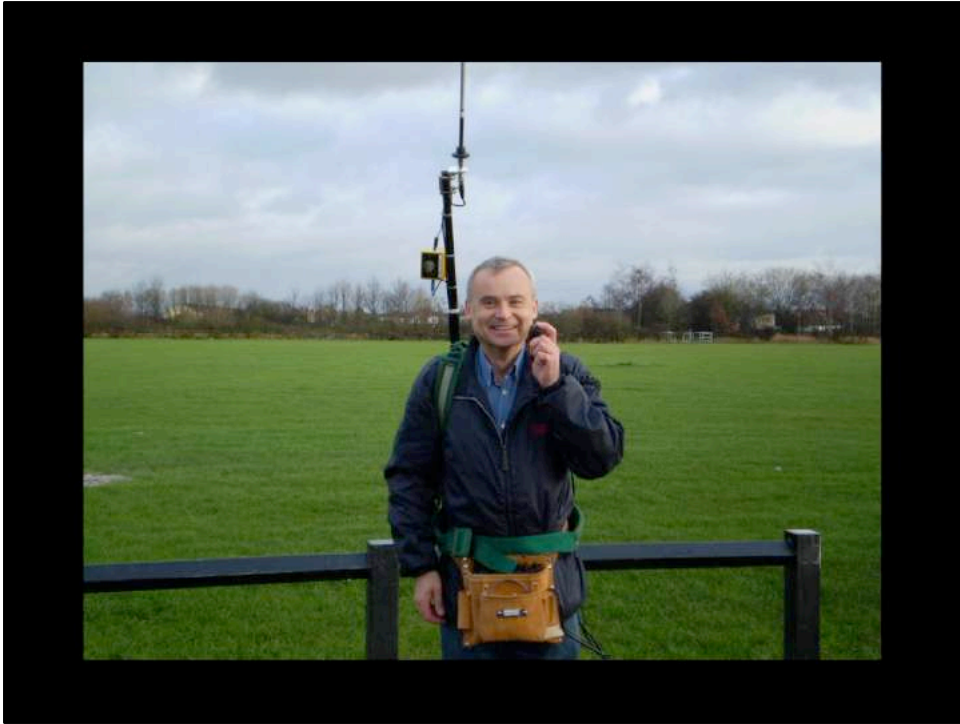


Lipo batteries

Sealed lead acid batteries



Pete, G6UOI (now a silent key)
Pedestrian mobile



Dave, G4AKC



Peter, VK3YE
Pedestrian mobile on the beaches in Melbourne



Marshall, VK3MRG

Summits on the Air (SOTA)

- International Award program
- Commenced in the UK in 2002
- Encourages portable operation in mountainous areas.
- Associations
 - Defined summits
 - Victoria, South Australia, ACT
- Prominence (150m)
- Activators
- Chasers
- Honour rolls
- You don't have to be a mountaineer



Summits on the Air (SOTA)



Summits On The Air

- UK, Ireland, Germany, Austria, Greece, Hungary, Switzerland, South Africa, France, Belgium, Czech republic, Finland, Poland, USA, Liechtenstein, Norway, Sweden, Slovenia, Netherlands, Lebanon, Corsica, Macedonia, Canada, Falkland Islands, Luxembourg, Denmark, Malta, Romania, Bosnia, Ukraine, South Korea, Spain, Sardinia, Italy, Portugal, Slovakia, Estonia, Australia

Summits on the Air

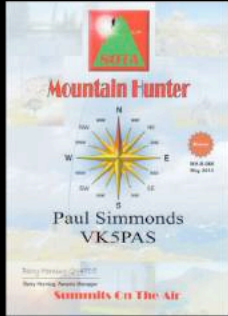
- “Shack Sloth”

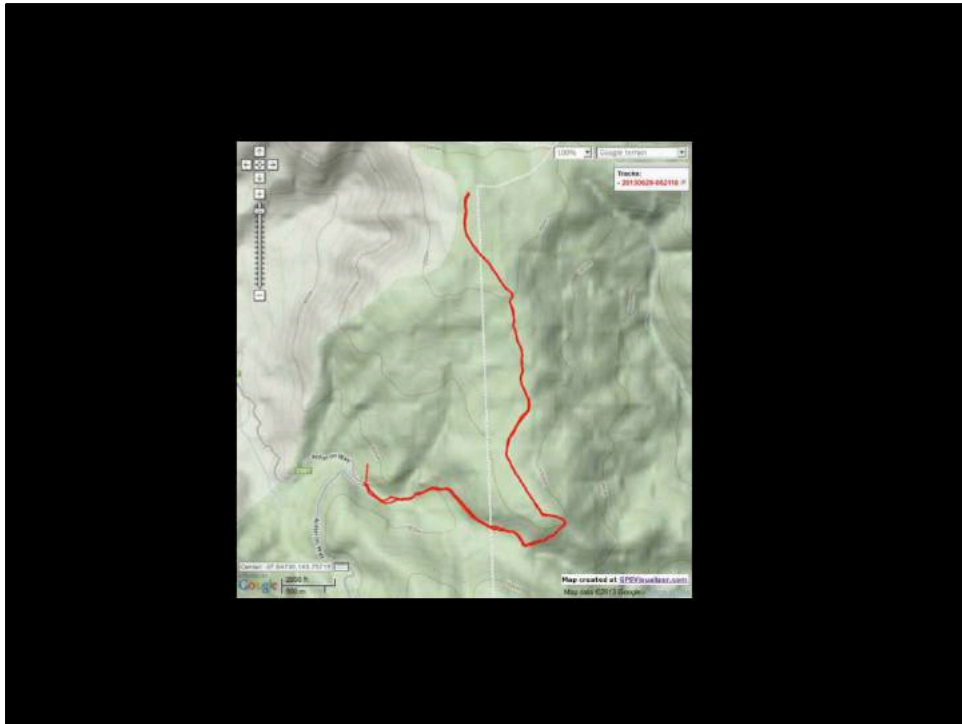


Summits on the Air (SOTA)

- “Mountain Goat”







Many SOTA activators are now using handheld GPS devices
And a technology called APRS (Automatic Packet Reporting System). Uses GPS
technology to allow other amateurs to see real time positioning.



Mike, 2E0YYY
My first ever SOTA contact



Steve WGOAT. Goats – Peanut & Rooster
Many videos on You Tube of his activations



Operating from the top of Mount Ngadjuri in the mid north



Allen, VK3HRA



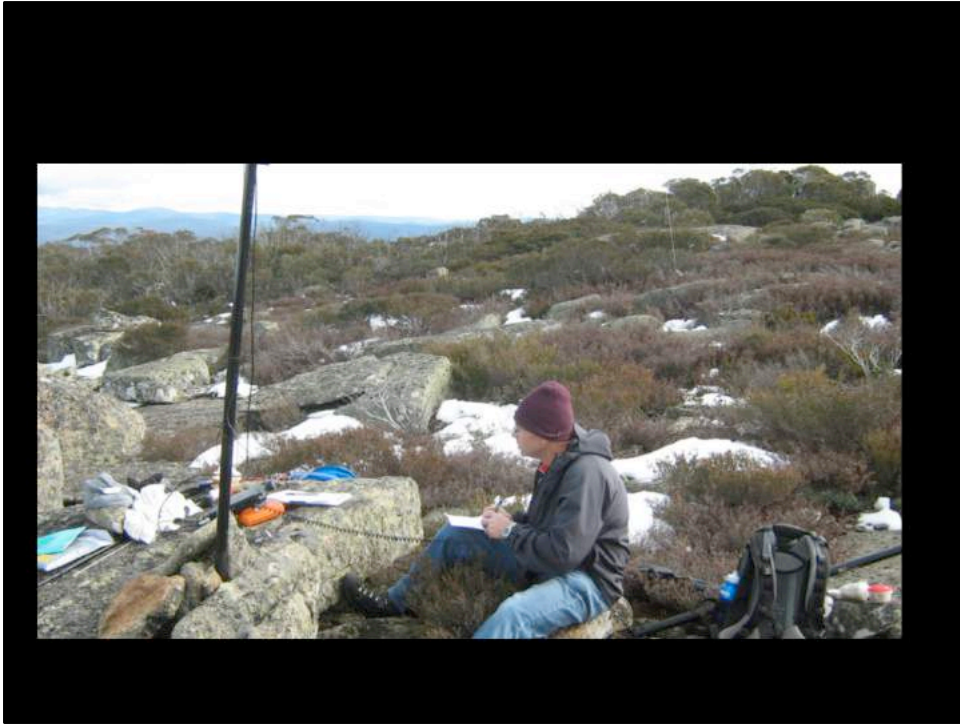
Operating from Brown Hill Range in the mid north



Operating from Mount Bryan



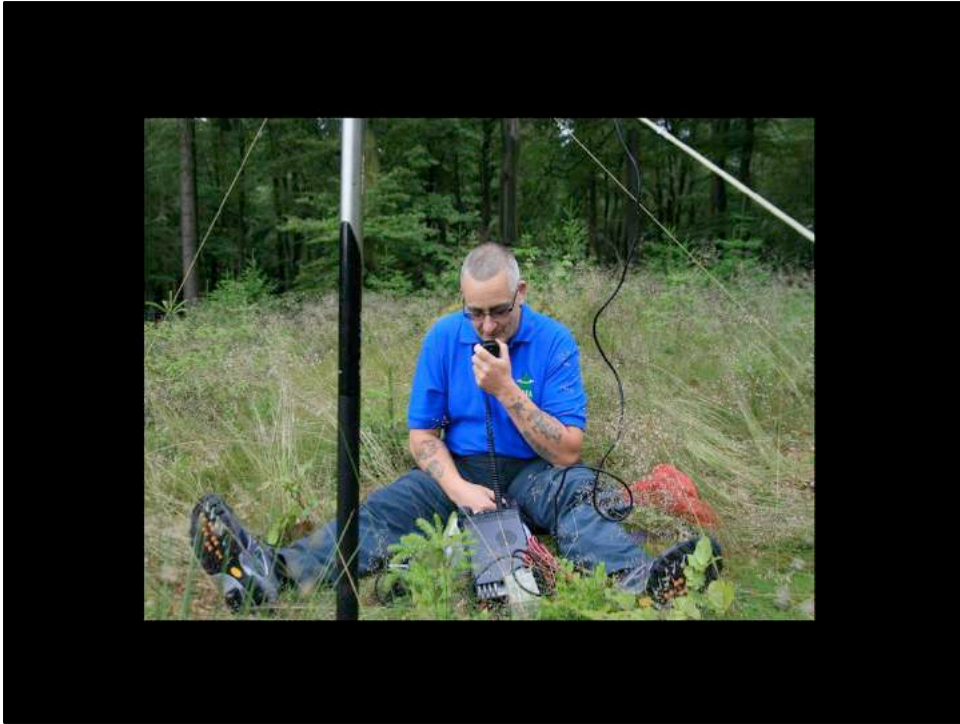
Ian, VK5CZ operating from Hallett Hill
Ian is the South Australian SOTA co-ordinator.



Glen, VK3YY



Andrew, VK1NAM



Steve, G1INK
3,358 points. Total of 972 summits.
Over 35,000 QSO's for SOTA



Roy, G4SSH
Never activated a summit
Has worked 17,530 summits
He is currently on 82,000 points as a Chaser.



Wayne, VK3WAM
836 points
142 summits activated

VK5 National & Conservation Parks Award

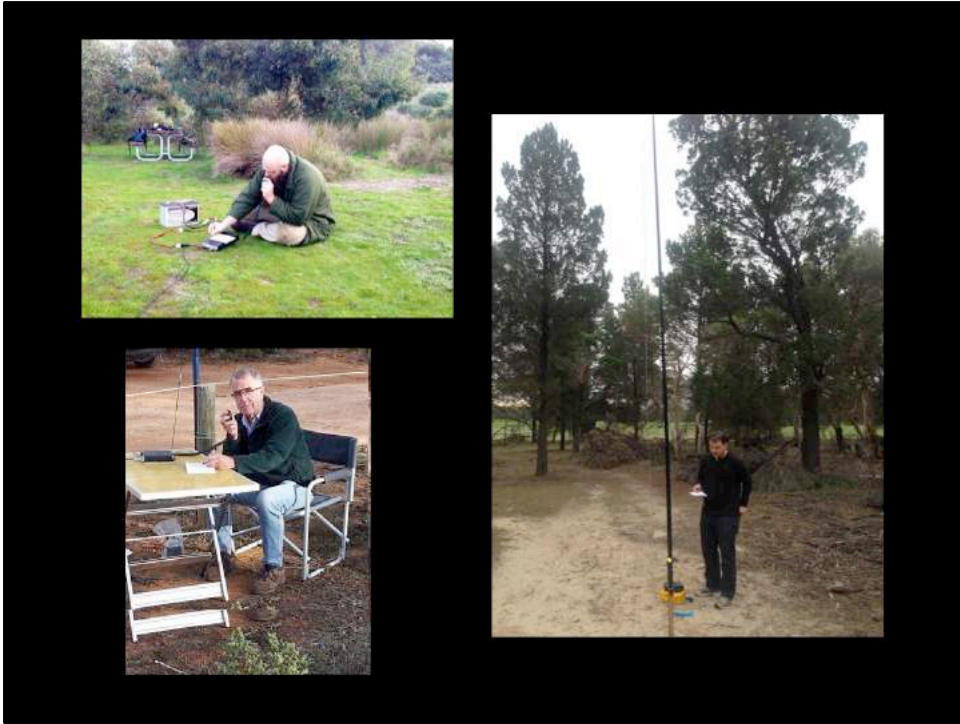
- Adelaide Hills Amateur Radio Society
- Encourages portable operation from SA's 21 National Parks & 262 Conservation Parks.
- Running since April 14th 2013
- Over 50 different parks activated



Andy, VK5LA



John, VK5BJE in the Ramco Point CP



Kim, VK5FJ, in the Coorong National Park.
David, VK5KC in the Redbank Conservation Park
Andy, VK5AKH in the Sandy Creek CP



Top left – me in the Clinton Conservation Park
Col VK5HCF & Brian VK5FMID in Piccaninnie Ponds CP
Bottom right – Night time activation in the Kenneth Stirling CP

World Wide Flora & Fauna

- International program
- Commenced in 2012.
- Aim – draw attention to the importance of protecting nature, flora & fauna.
- Qualifying parks in Australia – National Parks





Keith Roget Memorial National Parks Award

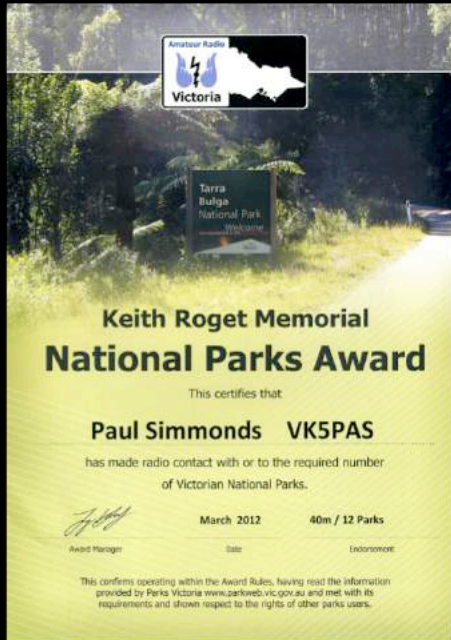
- Encourage portable operation from Victoria's 45 National Parks



The aim of this award is to encourage portable operation in Victoria's 45 National Parks.

A driving force behind this award is the late Keith Roget. His widow agreed in the 1980s that it was fitting that the award be renamed in his memory.

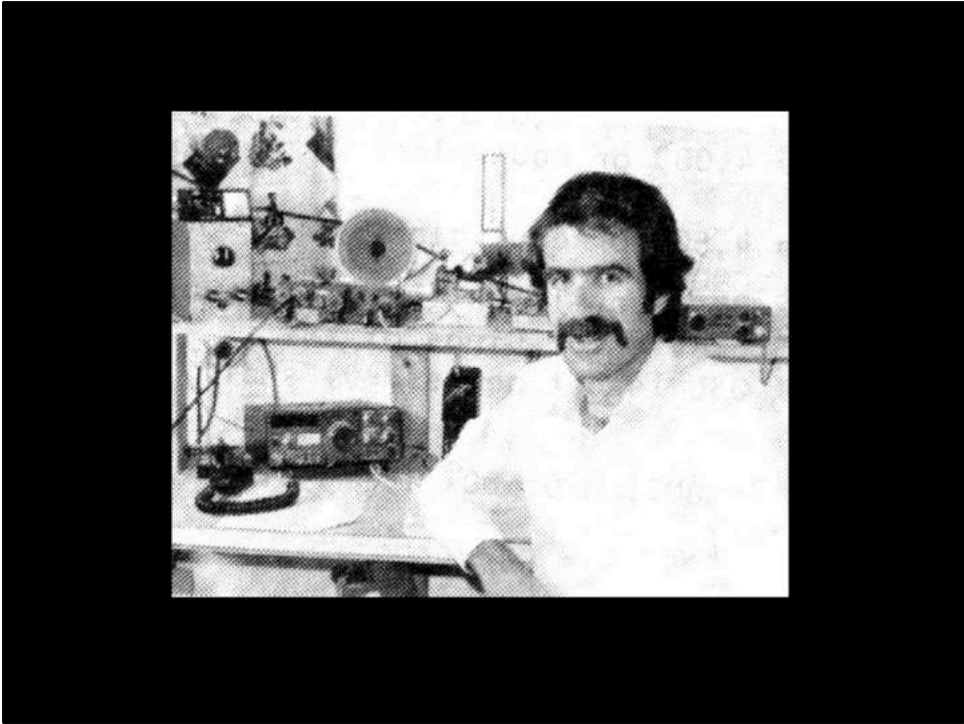
A contact with/from a National Park earns 1 point.



More information



<http://www.wia.org.au>



Any questions ???

<http://www.ahars.com.au>

