

A beginners guide to.....

SOTA, VK5 Parks Award, KRMNPA, & WWFF



By Paul Simmonds VK5PAS

¹ Image courtesy of <http://www.imrdb.org>

Introduction

It is hoped that this short publication will be of some assistance to those amateurs who are new to the exciting world of portable activity within amateur radio.

There are a number of very enjoyable activity programs which you can become involved in, including Summits on the Air (SOTA), the VK5 National & Conservation Parks Award (SANPCPA), the Keith Roget Memorial National Parks Award (KRMNPA), and World Wide Flora and Fauna in amateur radio (WWFF).

This publication is not an exhaustive compendium, but rather it contains basic information to allow amateurs to get started in the various programs.

Best 73 & have fun.

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Summits on the Air (SOTA)



Introduction & History

Summits on the Air (SOTA) was launched in March 2002 in the United Kingdom. It was an original concept by John G3WGV and developed by Ric G3CWI. It is an award scheme for radio amateurs and shortwave listeners that encourages portable operation in mountainous areas around the world. The program is not just for mountaineers. There is a SOTA peak for everyone, no matter what your level of fitness. SOTA has been carefully designed to make participation possible for everyone. There are a number of disabled activators and at least one successful blind summiter.³

As of March 2014, there were 90 participating Associations in the SOTA program around the world.

SOTA in Australia commenced in Victoria (VK3) in February 2012 and was followed by South Australia (VK5) in October 2012. There are now Australian Associations in VK2, VK3, VK4, VK5, VK8, & VK9.

Various SOTA certificates are available for

- Activators (those that climb to the top of a summit and operate)
- Chasers (people who contact the activators, either from the comfort of home, another SOTA summit, a local park, or a local hilltop)
- and SWL's (logging QSO's between activators and chasers).

² Image courtesy of <http://www.sota.org.uk>

³ <http://www.sota.org.uk/JoiningIn>

Qualifying summits

A list of qualifying summits in each Association can be found on the SOTA website (in Australia summits qualify by having 150 metres of prominence). The SOTA Management Team recommends a minimum 'relative height' or 'prominence' for summits of 150 metres (about 492 feet). Summits need to be distinct peaks. In other words there must be a 'vertical separation' or at least the Association's prominence value, between the summits and their associated saddles (also known as cols).



Summit identifiers

Each mountain region in the relevant SOTA Association is assigned a unique two character identifier. Each individual summit within the Region is assigned a number.

e.g. VK5/ SE-005 Mount Lofty

Points

Each summit earns the activator and chaser a score which is related to the height of the summit above sea level. Each summit is assigned points ranging from 1 – 10. In some Associations, a seasonal bonus of three points is also offered.

Operating frequencies

The majority of SOTA activity within Australia so far has been on the 40m band. And 7.090 has been adopted as a starting frequency. CW activity on 40m is also increasing. The 20m band has also been utilised by Australian operators with activity normally about 14.300 MHz.

Certificates & trophies

SOTA certificates are available for reaching certain scores. This includes the prestigious 'Mountain Goat' and 'Shack Sloth' certificates and trophies which are issued upon reaching 1,000 points.



SOTA website

More detailed information on the SOTA program can be found at the Summits on the Air website at.....

<http://www.sota.org.uk>

SOTA Australia Yahoo group

There is an Australian SOTA Yahoo group which is a common meeting point on the Internet for Australian SOTA enthusiasts. It is well worth joining to keep up to date on the latest news within Australia and the wider world and to view intended activations. The Yahoo group can be found at.....

https://au.groups.yahoo.com/neo/groups/SOTA_Australia/info?tab=s

⁴ Image courtesy of Andrew VK1NAM

How do I get started as a SOTA Activator?

Firstly, you need to find out what summits qualify for SOTA in the area that you live or are travelling through. This information can be found in the relevant Association Reference Manual (ARM) which in turn can be found on the SOTA website. Then head to the summit and follow some basic rules.

All your gear must be carried to the site. And remember, that final entry into the activation zone must be “non-motorised”, e.g. walking, climbing, skiing, cycling, horseback, etc.

To qualify the summit, you need just one QSO. However to gain activator points you require four QSOs.

Activation zone

What is the activation zone? It is defined as “*an unbroken area within 25 vertical meters of the summit*”. If you are able to get to within 25 vertical metres of the summit, and from your operating position to the actual summit it is possible to get to the highest point without descending beyond 25 vertical metres, then you are within the 'Activation Zone'. If, however, you are on a knoll that is within 25 vertical metres of the summit, but the land drops away below 25 vertical metres between your operation position and the highest point at the summit, then you are not in the activation zone.

Some important tips for Activators

1. Always seek permission from landowners prior to activating a summit
2. Operation must not be in, or in the vicinity of a motor vehicle
3. Entry into the activation zone must be by ‘non-motorised means’
4. You must operate from a portable power source, e.g. batteries, solar.
5. At least four QSOs must be made for you to claim your activator points.
6. Activator points can only be claimed for a particular summit, once in any calendar year
7. Operate in a considerate manner to others on the summit
8. Avoid damage & take home any of your litter
9. QSOs through repeaters do not count.

10. QSOs with others on the same summit do not count

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Whilst QRP is not a requirement remember that your batteries and mast must be carried as well.

There are some great tips for Activators on the SOTA website. Here is the link.....

<http://www.sota.org.uk/JoiningIn>



What about Chasing?

It has been reported that SOTA Chasing is one of the fastest growing specialist interest areas within amateur radio. Summit Chasers do not require any specialist equipment or fitness unlike the activator. Chasers can operate from home, their local favourite hilltop, or a local park. Many chasers often do go portable to escape the noise floor at their home. Chasers can also be other activators who are on the top of a qualifying summit working another activator (summit to summit contact).

Chasers accrue summit points per UTC day.

Activators often issue alerts on *SOTAwatch2*, so, as a Chaser, it is well worth being familiar with that website.

What is SOTAwatch2?

SOTAwatch2 is a spotting and alert facility for use by SOTA Activators and Chasers. It contains 'Latest Spots' and 'Upcoming Activations'. The SOTA spots are refreshed every 1 minute. The alerts allows Activators to place their activation intentions on the site. There is also a reflector. A reflector is a common meeting spot on the internet for amateurs pursuing SOTA activities. There are also a number of other links including 'Browse SOTA summits', a link back to the SOTA website and the SOTA database, a link to SOTA TV where you can post & view various SOTA videos, a link to the Summits on the Air Photo Pool, and a link to the SOTA Shop.

Please do NOT post park activations on *SOTAwatch2*, unless they are also on a SOTA summit. The appropriate place to spot Park Activators is either on the DX cluster or on the *parksnpeaks* site (see below).

<http://www.sotawatch.org/index.php>

SOTA apps for your phone

There are a variety of applications that you can download for use on your mobile phone. They include (and are not limited to) SOTA Goat, Rucksack Radio, and Pocket SOTA.



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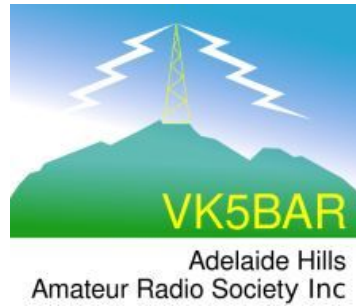


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⁵ Image courtesy of <http://ww1x.com/sotagoat/>

⁶ http://www.dl1dlf.de/rucksack_radio_tool

VK5 National and Conservation Parks Award



Introduction & history

The VK5 National and Conservation Parks Award commenced in April 2013 and is sponsored by the Adelaide Hills Amateur Radio Society (AHARS). Prior to this award, there was no known formal program that recognised operations from South Australian parks.

The aim of the Award is to encourage portable operation by radio amateurs from within South Australia's 21 National Parks and 262 Conservation Parks. It is a great way to see some of South Australia's spectacular parks, and at the same time enjoy the hobby of amateur radio.

The Award is available to:

- Activators
- Hunters
- SWL's

The Award is not limited to VK5 operators! All Australian and overseas amateurs and SWL's are encouraged to participate and apply for the various certificates.

There are various certificates offered.

- Activator certificates
- Hunter / SWL certificates

- Park to Park certificates
- Unique Park certificates

To qualify for certificates, Activators and Hunters accrue a specified number of points by either operating portable from a National and / or Conservation Park, or by making contact with an amateur/s operating portable from a National and / or Conservation Park.



Qualifying Parks

Only South Australian National Parks and / or Conservation Parks qualify. Parks such as Recreation Parks, Conservation Reserves, Game Reserves, etc do not qualify for this award.

Points

Each South Australian National Park is worth 2 points and each South Australian Conservation Park is worth 1 point.

Activators may only claim each National Park or Conservation Park for activator points once per calendar year.

However Hunters may work the same park once per UTC day for Park Hunter points.

⁷ Image courtesy of John VK5BJE

Activator & Hunter Certificates

For Activator & Hunter certificates, there are 5 levels ranging from Bronze to Diamond. Certificates are offered for each level (each level features a different photograph on the certificate – making each level certificate unique). A glass etched trophy is available to those amateurs reaching Diamond level.



Australian operators

- Bronze 10 points
- Silver 20 points
- Gold 35 points
- Platinum 50 points
- Diamond 70 points

Overseas operators

- Bronze 5 points
- Silver 10 points
- Gold 15 points
- Platinum 20 points
- Diamond 50 points

Park to Park certificates

Park to Park certificates are also offered for Activators contacting other VK5 Park Activators who are operating within a park. Points are combined e.g. VK5ABC in Belair National Park (2 points) works VK5XYZ in Giles Conservation Park (1 point). A total of 3 points is accrued by both Activators towards their Park to Park score.

- Bronze 10 points
- Silver 15 points
- Gold 20 points
- Platinum 40 points
- Diamond 50 points



Unique park certificates

Certificates are also issued for operating from or contacting Unique Parks. A unique park simply means a 'different' park. Or in other words a new park for your log.

National Park Uniques.....

- Bronze 5 unique NP's
- Silver 7 unique NP's
- Gold 10 unique NP's
- Platinum 15 unique NP's
- Diamond 21 unique NP's

Conservation Park Uniques.....

- Bronze 25 unique CP's
- Silver 50 unique CP's
- Gold 100 unique CP's
- Platinum 150 unique CP's
- Diamond 262 unique CP's

Yahoo group.

There is a VK5 Parks Yahoo group which can be found at.....

<https://au.groups.yahoo.com/neo/groups/sanpcpa/info>

The Yahoo group is dedicated to those amateurs who are interested in the VK5 Parks Award program. The Yahoo group is well worth joining, to keep abreast of the latest news and intended activations.

Mapping

I have found that Google maps has been unreliable when locating South Australian Parks. Two sites that are on the internet which are very good are as follows:-

Mapcarta

<http://mapcarta.com>

Wikimapia

<http://wikimapia.org>

Keith Roget Memorial National Parks Award (KRMNPA)

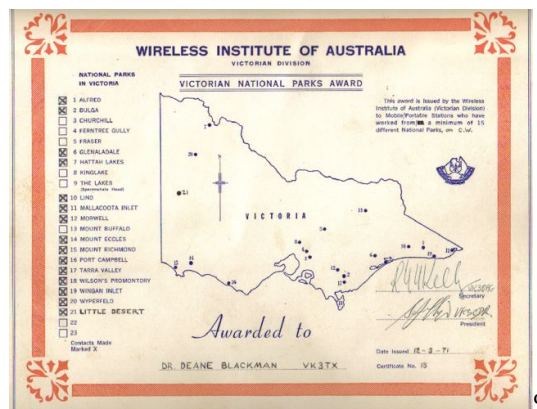


Introduction & history

The Keith Roget Memorial National Parks Award (KRMNPA) is sponsored by Amateur Radio Victoria. The aim of the award is to encourage portable operation in Victoria's 45 National Parks.

This award commenced in around 1970 and was known as the Victorian National Parks Award by the then WIA Victorian Division. At that time there were only 20 Victorian National Parks declared.

A driving force behind this award was the late Keith Roget who had served on the WIA Victorian Division Council. His widow agreed in the 1980s that it was fitting that the award be renamed in his memory to honour his contribution.



⁸ Image courtesy of Amateur Radio Victoria

⁹ Image courtesy of Amateur Radio Victoria

To qualify for a basic award, a radio amateur must make contact with and/or from a specified number of the 45 National Parks located within Victoria.

At this stage, Peter VK3ZPF is the only amateur to have worked from all 45 Victorian National Parks.

Points

A contact with/from a Victorian National Park earns one point.



The basic award is issued when the following criteria is met.....

- VK3 station achieves 15 points
- Other VK (non VK3) achieves 10 points
- DX station achieves five points

Endorsements

Various special endorsements are offered, including.....

- 25 points – making contact with and/or from 25 parks
- 45 points – making contact with and/or from all 45 parks
- CW Only endorsement
- Activated ALL Parks endorsement
- Worked ALL Parks endorsement
- Other endorsements are being considered

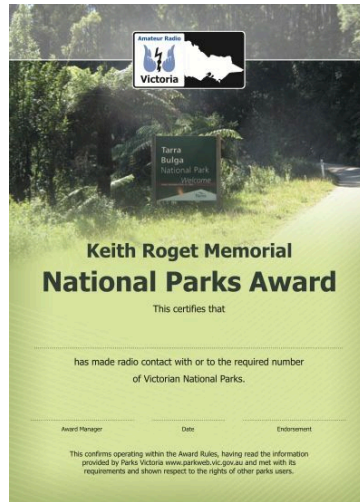
The cost of the award is AUD \$5 or 2 IRCs, to cover postage and costs.

¹⁰ Image courtesy of Peter VK3ZPF

For more information on the KRMNPA, please go to the Amateur Radio Victoria website at.....

<https://www.amateurradio.com.au/awards>

or contact Tony VK3VTH.



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Activity weekend

Each year a KRMNPA Activity weekend is held in November. This is a great opportunity to listen to or become involved with KRMNPA.

Parks Victoria

Parks Victoria has detailed information on each of the 45 Victorian National Parks.

<http://parkweb.vic.gov.au>

Yahoo group

There is a Yahoo group for the KRMNPA, which can be found at.....

<https://au.groups.yahoo.com/neo/groups/krmnpa/info>

¹¹ Image courtesy of Amateur Radio Victoria

World Wide Flora and Fauna (WWFF)



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Introduction

World Wide Flora and Fauna in amateur radio (WWFF) is an international and non-commercial program run by the co-ordinators of a large number of National Flora and Fauna programs. The WWFF program wants to.....

'draw attention to the importance of protecting nature, flora and fauna'.

Amateurs are encouraged to operate portable from designated nature parks and protected nature areas.

The WWFF program is run by the Chairman Lars PH0NO and Vice chairman Max IK1GPG and the national co-ordinators of the member countries. There are currently a total of 38 participating WWFF member countries in Europe, North America, South America, Asia, and the Pacific.

More detailed information on the WWFF program can be found on the WWFF 'global' website at.....

<http://www.wwff.co>

¹² Image courtesy of World Wide Flora, <http://www.wwff.co>

History of WWFF

The Flora and Fauna movement within ham radio was initiated in 2008 by the Russian Robinson Club as 'World Flora and Fauna' (WFF). In late 2012, the program was relaunched as 'World Wide Flora & Fauna in amateur radio' (WWFF). The Australian WWFF program (referred to as VKFF) commenced in March, 2013.



Qualifying Parks

Qualifying parks for the WWFF program in Australia are those National Parks that were established prior to 2008. A full list of all qualifying Australian National Parks and detailed information on the Awards available can be found on the Australian WWFF website at.....

<http://wwffaustralia.weebly.com>

or in the WWFF Directory.

WWFF Directory

The WWFF Directory contains all the qualifying National Parks and Nature Reserves around the world. The Directory can be downloaded from.....

<http://www.wwff.co/p/wwff-downloads.html>

Recommended frequencies

- Phone: 3.744, 7.144, 14.244, 18.144, 21.244, 24.944, 28.444
- CW: 3.544, 7.024, 10.124, 14.044, 18.084, 21.044, 24.894, 28.044

What is the term '44'?

During a WWFF QSO you may hear the term '44'. What does this mean? The first digit '4' represents the four elements: earth, water, air, and fire. The second digit '4' represents the four directions: north, south, west & east.

WWFF LogSearch

Activators are encouraged to submit their activator logs to the relevant National WWF co-ordinator, so that they can be uploaded to the WWFF LogSearch facility. There is currently a total of 3,635,731 QSO's in the database from 4,149 different references in 85 DXCC's.

<http://logsearch.wwff.co/index.php>

WWFF Awards

The WWFF program offers a multitude of award certificates. WWFF features a global award program for all hunters and activators of WWFF references. The participating National programs in WWFF also maintain various National award programs (this includes Australia). A list of national award programs can be found by clicking on the following link.....

<http://www.wwff.co/p/wwff.html>

In October 2013, the WWFF Global Award program was launched. These awards are based on the WWFF LogSearch database. Currently, two awards are offered as follows.....

- WWFF Hunter
 - The WWFF hunter award starts at 44 references with upgrade steps of 44 up to 444 and then steps of 100. A "novice" award

has been added, especially for new hunters of the WWFF program.

- WWFF Activator
 - The WWFF Activator award starts at 11 references and has upgraded steps of 11 references.



The Australian VKFF Award program is open to:

- Activators
- Hunters
- SWL's

The threshold for QSOs and activation time has been lowered for the VKFF Awards. For global WWFF awards, a minimum of 44 QSOs are required and an operation time of 2 hours. **Please note that for VKFF awards, a minimum of 10 QSOs is required, with an activation period of 30 minutes.** Also note that this can be over multiple activations.

For VKFF Activators, there are five levels as follows.....

- | | |
|------------|-------------------------------|
| ➤ Bronze | work from 10 VKFF references |
| ➤ Silver | work from 20 VKFF references |
| ➤ Gold | work from 30 VKFF references |
| ➤ Platinum | work from 40 VKFF references |
| ➤ Diamond | work from 50 VKFF references. |



For VKFF Hunters and SWL's there are also five levels as follows.....

- Bronze work / hear 10 VKFF references
- Silver work / hear 20 VKFF references
- Gold work / hear 30 VKFF references
- Platinum work / hear 40 VKFF references
- Diamond work / hear 50 VKFF references.

WWFF Forum

WWFF has a dedicated Forum where there is a variety of interesting information and you can stay up to date with the latest news and activities. You are also encouraged to post your intended park activations on the Forum.

Facebook & Twitter

<http://forum.wwff.co>

WWFF has a Facebook site.....

<https://www.facebook.com/groups/wwff44>

and WWFF is also on Twitter. The link is on the WWFF global website.

Yahoo group

There is also an Australian WWFF Yahoo group, which can be found at.....

<https://au.groups.yahoo.com/neo/groups/wwffaustalia/info>

How do I activate a WWFF park?

In essence:-

- You and all the equipment you use need to be within the perimeters of the park
- For Australian awards you require 10 QSOs and 30 minutes activation time
- For WWFF global awards you require 44 QSO and 2 hours activation time.

How do people know I am in a WWFF location?

- Post your intended activation on the WWFF forum
- Post your intended activation on the Australian WWFF Yahoo group
- If possible use the Flora & Fauna frequencies (not always possible)
- When calling CQ mention where you are
- Once worked you are likely to be spotted on the DX cluster.

How do I confirm an activity / send in a log?

- Send your log in ADIF format to the National co-ordinator.

parksnpeaks

The *parksnpeaks* site is a spotting and alert page which has been created by Allen, VK3HRA. It is free to register and is a very good source to follow various park activations for the VK5 Parks Award, KRMNPA and WWFF.

The screenshot shows the homepage of the *parksnpeaks* website. At the top is a wide landscape photograph. Below it is a navigation bar with links: VK Spots, VK Alerts, VK QRP, KRMNPA, SANPCPA, VK WWFF, and Help. The main content area is divided into several sections:

- Status:** Shows the last update time (GMT Fri,21-03-14 22:54 - EST Sat,22-03-14 9:54) and a login form with fields for Username and Password, and a 'Log in' button. There is also a link to 'Register new account'.
- Current Spots:** A list of recent spotting reports, each starting with a UTC timestamp and details about the spot (e.g., SOTA VK1NAM/2 in VK2ST-016 - 7.097 ssb *cq cq waiting for VK2TWR (via RRT). Posted by VK1NAM).
- VK Blogs:** A vertical list of VK call signs including VK1DA, VK1DI, VK1NAM, VK2FMIA, VK2IB, VK2JI, VK2TWR, VK2YW, VK3ARR, VK3BYD, VK3CAT, VK3HRA, VK3KAB, VK3MRG, VK3PF, VK3WAM, VK3YY, VK3ZPF, VK5AKH, VK5BJE, VK5HCF, VK5LA, and VK5PAS.
- VK Groups:** A list of group names including VK QRP Club, SOTA Australia, SOTA VK1, SOTA VK2, SOTA VK3, KRMNPA, SANPCPA, and WWFF.
- Links:** A section for additional links.

<http://www.parksnpeaks.org>

Checklist for SOTA / Parks activators

Last year, Allen VK3HRA did a 'straw poll' of various aspects of SOTA activating. Most of the regular SOTA activators responded. The results are equally applicable to Park activations.

What to do in the planning stages?

- Check maps, google earth
- Check weather reports
- Google search the summit or park. Has someone been there before?
- Are there summits and parks I can combine in one trip?
- Ensure batteries are charged
- Post intentions on *SOTAwatch2* or *parksnpeaks* or various Yahoo groups
- Gear prepared? e.g. radio, pen, paper, compass, etc.
- Let someone know your intentions.

How do you select the summit or park to activate?

- Anything not done before and reachable
- Lack of tourists
- Reasonable access
- Can be reached in the time available
- Estimated physical effort required.

What gear do you take?

- Transceiver
- Antenna
- Squid pole
- Batteries
- First aid kit
- Food & water
- GPS
- Paper & pen, log book

- Camera / video
- Waterproof gear
- Bothy bag/ rain coat
- Mobile telephone
- Sturdy walking boots
- Insect repellent
- Torch
- Sunscreen
- Knife



What gear do you leave behind?

- Anything you can do without
- Change of clothes & towel (back in the car)
- Extra food & water (in the car)
- Tip – read blogs and see photos for further ideas.

Measures of a successful activation?

- Contacts in the log
- A good view
- A summit to summit contact
- A park to park contact
- Reports of good signals from chasers / hunters
- Enjoying the time out-side in the bush.

What is too risky?

- Going out in bad weather, especially electrical storms or on high fire risk days
- Terrain that could cause an injury, e.g. thick scrub, rocks
- Not advising somebody of your intended route and approximate timing
- Entering restricted areas without permission
- Damaging the site you choose
- Not getting in touch with someone if you are late back from the activation.

How else can I attract Park Hunters and fill up my log?

Because there is currently no audible phone alert app for park activations as there is for SOTA. So filling up your logbook for a park activation is a little more challenging.

Here are some tips

- The secret is in the antenna
 - We have all heard this, but it is true. It has been said that antennas compose one third of your QRP station. The other two thirds are your operating equipment and your operating skills.
- Try different bands
 - Propagation is not always kind on 40m for the longer hauls around VK, and certainly not for DX if you are running QRP. So, if possible, try operating on a selection of bands. This may not always be possible due to restrictions with licences and lack of appropriate antennas. But to give amateurs further afield a chance to get in the action as well consider using 15 or 20 metres. The vast majority of portable activity here in Australia seems to be on 40m SSB, which often excludes those in Western Australia (VK6).
- Place your intentions on as many forums as possible
 - The more people who know you are out there the better.
- Consider the time of day / know when the bands are open
 - Who is your targeted audience? There is no point going out at midday if you want to work Europeans on 20m long path. So try to time your activations for those who you would like to get in the log.
- Look at the solar figures / propagation conditions
 - Propagation conditions are extremely important with any QRP operation. If the solar figures are suggesting poor conditions then maybe consider putting off an activation until another day.
- Ask someone to place you on the DX cluster. Remember, the DX Code of Conduct for the cluster.....It is impolite to self-spot.
- Consider setting up an SMS group on your mobile telephone

- Try a group e-mail to all your amateur friends.
- Use the local repeater to let people know that you are there.

Remember Park Hunters, please don't just work the station and move on. Give some consideration to the Park Activator and other Park Hunters who would most likely love to get the park in their log. Let as many other amateurs as possible know that the Activator is there in the park looking for contacts.

Operating skills / practice

With the popularity of SOTA & Parks activities increasing in Australia, you may end up with a 'pile up' following calling CQ. Here is a 'recommended' operating practice.....

- call for any SOTA/parks activators
- then call for QRP stations
- then call for portable or mobile stations
- then call for any DX
- then call for stations who can hear you, but with difficulty (there is nothing worse as a Chaser/Hunter listening to an activator who is weak, but then disappears down below the noise floor due to a change in the band.)
- And finally call for anybody else (now the fun starts).

Always remember the DX Code of Conduct

<http://www.dx-code.org>



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¹³ Image courtesy of DX Code of Conduct, <http://www.dx-code.org>

REFERENCES

Amateur Radio Victoria, 2014, Amateur Radio Victoria, Melbourne, Victoria, viewed 13th March 2014, <https://www.amateurradio.com.au/award>

DX Code of Conduct, 2011, DX Code of Conduct, viewed 13th March 2014, <http://www.dx-code.org/home.html>

Paul SIMMONDS (VK5PAS), 2014, Paul SIMMONDS, viewed 13th March 2014, <http://paulsimmonds.weebly.com>

Summits on the Air, 2012, Summits on the Air, Scotland, viewed 13th March 2014, <http://www.sota.org.uk>

Summits on the Air Australia Yahoo group, https://au.groups.yahoo.com/neo/groups/SOTA_Australia/info

VK5 National & Conservation Parks Award Yahoo group, <https://au.groups.yahoo.com/neo/groups/sanpcpa/info>

World Wide Flora & Fauna – Australia, 2014, Paul SIMMONDS, Mount Barker, South Australia, viewed 13th March 2014, <http://wwffaustralia.weebly.com>

WorldWide Flora & Fauna in amateur radio, 2014, WWFF, Netherlands, viewed 13th March 2014, <http://www.wwff.co>

Appendix 1

So you want to buy an 'Adventure Radio'!

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Here are some ideas for selecting or buying a transceiver for portable use, now commonly known as 'Adventure Radios'. This term is wide enough to cover the use of radios for casual portable operation in a field day through to more specialised operation where it is necessary to hike for some time through a park or to a summit to reach the desired portable location. Such a park can be in the same location. St Mary Peak, the second highest peak in South Australia, registered for SOTA as VK5 NE 001, is within the Flinders Ranges National Park and Australia's highest peak, Mount Kosciuszko, VK2 SM 001, is in the Kosciuszko National Park in New South Wales. To some an Adventure Radio is a smaller transceiver capable of being reasonably back-packed into a desired location. A small QRP radio can be suitable for both back-packing to a summit and also for a park activation. Before purchasing a radio especially for portable operation, consider if you have a suitable radio already and use it to try a few activations in parks and easy summits to see if you like the activity.

If you enjoy it there are plenty of suitable radios on the market, ranging from a 'shack in the box' (such as an Yaesu FT817nd, a QRP radio which covers HF, VHF and UHF or the newer Elecraft KX3 covering HF and six metres) to a CW only radio built from a kit, e.g. MFJ, Ten Tec and YouKits, as well as others. There are also larger but compact radios, such as the Yaesu 897D, Yaesu 857D and Icom IC7000. Ross Pittard, VK3CE, writing in *Amateur Radio's Foundation Corner* V. 82 No. 3 March 2014 pp. 9 – 11, describes older transceivers suitable for Foundation Licensees. Some of the radios he discusses would also be quite suitable for portable operation, e.g. Yeasu FT7, Kenwood TS120V and the Icom 706 Mk11G. Remember that a 100 watt

compact transceiver, while perfect in a park, may be totally inappropriate for a demanding summit.

Make a careful choice considering what you may want to do at a much later date.

1. **Budget, affordability**, given the proposed usage. Remember if you buying a specialised QRP radio you need to ensure you can justify the expenditure. There is nothing worse than buying a specialised transceiver and not being able to use it because you don't have the time. Consider the impact on the 'family' budget.

2. **Where to buy the radio?** If the warranty and after-sales service matters to you, then buying from an Australian dealer for ICOM, Yeasu or Ten Tec makes sense. If not, or the radio is only available by importing it, then purchase from the manufacturer, such as the Elecraft KX3. If you choose to buy a used radio you might want read Jim Linton's (VK3PC) article in *Amateur Radio V77* Nos 1, 2 January/February 2009 pp. 13 & 14. Jim offers many tips in selecting a used radio, which if followed, may save you some heart-ache. The article is too long to be summarised here.

3. Check out what warranty and after sales service will be available on an imported radio?

4. What is the operator's current set up and how does QRP fit into her program? What else does he have?

5. Power output. Is the radio QRP, such as the FT817nd, that is a 5 watt radio, or is it capable of higher power such as the Elecraft KX3 (10 watts) or the Ten Tec Argonaut V1, 10 watts? Operating QRP is challenging and great fun and it intensely satisfying to obtain contacts this way. Your operating skills will develop accordingly.

6. What is proposed as a power supply? If the radio is used for casual QRP or low power operation in parks by a non-hiking owner, a reasonable capacity lead-acid battery might be adequate. Sealed lead acid batteries of 4.3 or 7 amp-hours can be carried! If the owner is a SOTA enthusiast, likes hiking and

climbing, then a radio with the lowest standing current drain may go to the top of the desirable list, e.g. the Elecraft KX3. The Ten Tec Argonaut, for example, has a drain of 550 ma on receive but I think it is too big for back-packing, but great in the parks. Compare radios such as the FT817nd (400ma) and the ICOM 7000 (1.6 amps) on receive? More specialised lithium based batteries can be considered later.

7. What bands does the radio cover? A 'Shack in the box', such as the FT817nd, may be desired to enable VHF and UHF portable operations or for HF only, the Ten Tec Argonaut V1, 160 to 10 metres, minus 60 (in the USA) and 12 metres may appeal although the non-inclusion of 12 metres brought Ten Tec considerable criticism. You can read Ten Tec's thinking on their web site. If a *small* radio is desired the Elecraft KX3 may be your choice.

8. Transceiver RF qualities. I don't propose to deal with these in detail. All the manufacturers list the specifications in their brochures. Get hold of the manufacturer's brochures and read them and check what all of the parameters mean. Consult a hand book in necessary. It is important to remember that an 'Adventure Radio' does not have to perform like a DX/contest radio or a home radio used in a noisy location. You will be amazed at how quiet it is in parks and on summits. You can easily hear and copy signals that do not register on the signal strength meter. What does count for me is the capacity to resolve a signal in a busy band with strong signals on adjacent frequencies. Good reviews can be found in the pages of *Amateur Radio* or *QST*. You will find references to three reviews from *QST* for the Elecraft KX3, the Ten Tec Argonaut V1 (model 539) and the Yaesu FT817 which deal with the issue of adjacent signal interference/overload (among other matters) using various descriptive terms. Make sure, if you consult these reviews, that the parameters are common to each of the three radios otherwise the comparisons will be unequal. The ARRL's *QST* sometimes has additional reviews which explore some features in greater detail. The ARRL has just published a new book on how transceiver performance is measured. Bob Allison, WB1GCM, is the author and the book is titled *Amateur Radio*

Transceiver Performance Testing: Understanding Transceiver Performance Data.

This is a collection of his reviews previously published in *QST*.

Does the radio offer RF or Audio compression on transmit? A *small* amount of compression can make a difference. In my case the answer is no for Yeasu and yes for the Ten Tec. I own both of these radios. Remember using audio compression increases battery drain so you should use it sparingly if at all.

9. Weight. A back-packing radio needs to be lighter than a radio used for casual use in a park where the operator's position is in easy walking distance from her vehicle. In my view an FT817nd is the heaviest radio that is capable of being back-packed. I have backpacked mine up SOTA peaks where I have had to hike for over two hours and, with a 4.3 amp hour Sealed Lead Acid Battery (SLAB), and it takes a toll! Don't forget you are also carrying an antenna, a squid pole, ropes and bungee straps, water, food, sunburn cream as well! Recently, in activating Maria Island, Tasmania, I carried two SLABS: I did not want the activation to fail because I ran out of power! It took me two days to recover!

10. Ergonomic issues

Manual

Is the radio menu driven or simply uses switches? Compare the FT817nd with its deep menu system and an 80 page manual with the Ten Tec Argonaut (a manual which is an A4 sheet both sides). Don't be put off by a menu driven radio. You will find in most instances you will not need to alter settings in most activations. As the reviewers say: 'set and forget'. But you could consider making yourself a reminder sheet with the key functions listed, e.g. how to increase power, or add noise reduction, and laminate it and keep it with your gear.

Bail or stand

The FT817 does not include a stand. I purchased my bail many years ago from *BHI* in the UK. It is light and very helpful with long-term use of the radio. *SOTAbeams*, in the United Kingdom, sell a plastic one for a number of 'Adventure Radios', including the FT817nd. Tilting the radio to improve the angle of the display is of great importance in an activation which goes on and on, may be for two hours or more. In *Amateur Radio V. 75* No.11 of November 2007, pp. 8 – 10, Ron Fisher, VK3OM, in his review of the Yeasu FT - 450 found the absence of a bail or flip bracket surprising on what he thought otherwise was a very fine radio.

Display

Can you read the display in bright sunlight? Check the screen of your smart phone while wearing sunglasses outside. I can't read the screen information on my phone and must remove my glasses. The same can apply to your radio! Does the manufacturer allow for changes to the display colours? How big is the display? Do you get eye-strain after an hour or so of operation?

Recovered audio

How does the audio sound to your ears? Is the radio noisy? Some radios have more background noise than others. This becomes very tiring to the operator. Does the speaker face up or down? Is it covered? This last feature is an issue in wet weather. For example, the Ten Tec's speaker is open to the elements. But the sound is great! I don't use the Ten Tec unless the weather is fine. Remember if you choose to carry an additional speaker or headphones it is additional weight.

Experience an activation

Before buying a radio ask to accompany another amateur on an excursion and have a chance to see a setup, use the radio, or two and see what may suit you. While on the excursion look at the power sources, antennas, supports and other features of the station. Most SOTA and Park activators are only too pleased to provide such an experience.

Keeping it all in perspective

Most of all it is a hobby and it is about having fun, getting outside in the parks and on peaks, enjoying the natural world, getting some exercise and meeting other people. It might provide a chance to combine your interest with that of your partner and family.

If I can be of assistance to you in developing your station please don't hesitate to contact me. Many of the amateurs who are active in the field run blogs: have a look at Paul's blog, VK5PAS, and he has an index of other blogs on his page. Some of the blog owners discuss equipment and you can also see how others found their operating positions: many include maps and GPS coordinates.

11. Other requirements. You *will* need an antenna. My strong advice is to use resonant wire antennas at first. A simple half wave dipole will perform well. Start on 40 metres. When you have had some experience add another band appropriate to your licence level. There are plenty of ideas for building a linked dipole and if you don't want to make the link insulators or the centre insulator those bits can be purchased (see VK5BJE.wordpress.com). At QRP levels it does not need to be balanced if your feed-line is coaxial cable. An unbalanced antenna will work well. If you later increase your power I would recommend a balun to ensure a balanced antenna. If you are a Foundation licence holder you might want to add links for 15 metres and 10 metres. Adding links is very easy and effective. A 40 metre antenna used on 15 metres works the third harmonic (say $3 \times 7.1 \text{ MHz} = 21.300 \text{ MHz}$ which is likely to be too high in frequency) and it will not be a perfect match and you most likely will need an antenna coupler (tuner). It is better to make a linked dipole and select the part of the band that suits you. Always start with the highest band and get that tuned. Then move to the next band lower in frequency and so on. You cannot afford to waste power with a high Voltage Standing Wave Ratio (SWR) and carrying a coupler is additional weight. It is quite reasonable to use 50 Ohm coaxial cable (make sure you buy good quality RG58 coax, preferably double shielded) as a feed line. It is rugged and not as easily damaged as very thin coax, such as RG174.

Finally, most portable operators use a 'squid pole' as an antenna support with the dipole configured as an inverted V. However, if you don't have a squid pole, use a rope to haul the centre of your antenna into a tree and tie each end off in bushes, stumps, rocks or whatever else is available. I have used my 'go to' box, my ruck-sack and a 'drift-wood' tripod as tie-off points!

References

Allison, Bob, 2014, *Amateur Radio Transceiver Performance Testing: Understanding Transceiver Performance Data*. ARRL, Newington, CT
ARRL Laboratory Expanded Test-Result Report Yaesu FT-817. ARRL, Newington, CT

Fisher, Ron, *The Yaesu FT-450 all mode HF and six metre transceiver with IF DSP, Equipment Review*. Amateur Radio V. 75 No.11 of November 2007, pp. 8 – 10

Linguist, Rick, 2001, *Yaesu FT-817 Multiband Multimode Transceiver Product Review*. QST April 2001 six pages not numbered in down load.

Linton, Jim, *Buying Second Hand Equipment*. Amateur Radio V77 Nos 1, 2 January/February 2009 pp. 13 & 14

Pittard, Ross, *Foundation Corner 24 – 'Pre – loved' HF transceivers*. Amateur Radio V. 82 No. 3 March 2014 pp. 9 – 11

Wilson, M, 2013, *Ten-Tec 539 Argonaut V1 HF QRP Transceiver*. QST August 2013, pp. 43 - 47

Wilson, M, 2012, *Elecraft KX3 HF and 6 Meter QRP Transceiver*. QST Dec 2013, pp. 39 - 44

About the author

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