

Messages and News from RASA The Radio Amateur Society of Australia



November 2022

A

and the

MW MW'S

How to fix things (Or at least give it a good try)

RASA Free membership renewal







#### **Publication Information**

Contact: info@vkradioamateurs.org

http://vkradioamateurs.org

QTC is a publication of The Radio Amateur Society of Australia Inc. ABN: 64 687 227 446 (RASA)

QTC is published every quarter. If you would like to receive your copy you can either visit our web site to download or send us an email and we'll put you on our distribution list.

You are welcome to join RASA or make a donation to support our work.

QTC is Copyright © 2022

Email us at info@vkradioamateurs.org

Cover picture credit: Ian VK3BUF

# QTC from the Editorial Team

## Welcome.

It's been a while since the last edition of QTC, but we hope you'll find this issue loaded with thought provoking articles and interesting stories about what's going on in the world of Amateur Radio in Australia.

Our headline news this edition relates to PerthTech and a joint presentation by the Presidents of the WIA and RASA. In addition, the Presidents held a number of joint meetings, including with the AMCA. What's clear is that the Presidents of these two bodies want to work together... but does Scott enjoy the support of his board?

As we prepare this edition, much of the eastern half of Australia is being battered by record-breaking floods. We hope all our readers are safe. We can report that once again the North-East Victoria Amateur Radio Club (NEVARC) are raising funds for flood impacted victims. Read more in this issue.

Off the back of the last issue, we have an important article on bullying and harassment, along with a joint message from the RASA and WIA Presidents.

We also respond to some troubling stories from the WIA News. When news is misleading or simply does nothing to progress our hobby, we have an obligation to call it out.

As has become the norm, QTC opens with a copy of the "ethos and ethics of amateur radio".

We also present some important questions around Class Licencing and Callsigns... do we have an impending callsign crisis?

In our cover story Ian VK3BUF poses the question (and offers some answers) on how

to fix things.

QRM Guru now offers even more online support, with a dedicated online ticketing system... check it out.

In other news, RASA is trialling a one-year *FREE* renewal for existing members. Read about it on page 16.

There's a news brief about low band operations from Norfolk Island.... And a great article by Andrew VK1DA on portable CW operation.

And there's a load of other articles that we hope you'll find interesting.

In case you're wondering, we've held over the second part in the series about power lines and bushfire risk... it's been too wet to get out in the field. We'll bring you the article as soon as conditions permit.

And most importantly, whatever element of our hobby interests you, get active, promote the hobby, and have fun doing it.

Stay safe and healthy.

73, QTC Editorial Team

QTC Editorial Team info@vkradioamateurs.org



## **RASA Membership**



We believe we should be measured by our achievements. And we can only succeed with your support, so thanks to all our members and supporters for helping us make this happen.

And thanks to everyone who has sent us emails with feedback.

We listen to our members and respond to emails and questions about our initiatives, policies and priorities.

Please support us by joining. Joining is just \$10 and its simple  $- \frac{\text{follow this link}}{\text{follow the link}}$ .

We have heard from a number of members who are not receiving our bulletins or emails.

Please drop us an email if you're not sure if your membership is up-to-date and we'll get back to you.

Also, please check your spam or junk folders; some ISPs and mail clients are very aggressive with how they categorise incoming emails.



#### AUTHORISED DISTRIBUTOR OF









INFO@RFSOLUTIONS.COM.AU T: 07 3264 6443 WWW.RFSOLUTIONS.COM.AU

## The ethos and ethics of Amateur Radio

Like many hobbies, Amateur Radio has traditions, jargon and practices that are not always apparent to the newcomer. Your licence entitles you to get on the air and transmit, but, as a newcomer, you need to familiarise yourself with the way the hobby works operationally before transmitting.

Getting to know how amateur radio stations operate will provide a smooth and stressfree entry to this great hobby of ours.

Have a listen around the bands before you first transmit (if you haven't already) – monitor typical amateur QSOs (conversations). This will give you a feel for on air practices.

Once you start transmitting, steer well clear of controversial topics including:

- religion;
- politics;
- business (you can talk about your profession/trade, but you cannot advertise your services or those of anyone else);
- derogatory remarks/observations/jokes directed at any group (gender, ethnic, religious, political, sexual orientation, etc.); and
- off-colour humour.

Above all, apply common sense and good taste.

Do NOT use CB jargon – you will annoy your fellow amateurs and will be ostracised at best or roundly criticised on air at worst... Amateur and CB radio are different hobbies, with different operating practices. This hobby has many participants with as many differing views. Remember, you are also prohibited from transmitting any form of entertainment.

The American Radio Relay League has, for many years, published a guide for new amateurs, known as The Amateurs Code:

The Radio Amateur is:

**CONSIDERATE**... They/Them never knowingly operates in such a way as to lessen the pleasure of others.

**LOYAL**... They/Them offer loyalty, encouragement and support to other amateurs.

**PROGRESSIVE**... They/Them keep his/her station up to date. It is well-built and efficient. His/Her operating practice is above reproach.

**FRIENDLY**...They/Them operate slowly and patiently when requested; offers friendly advice and counsel to beginners; kind assistance, cooperation and consideration for the interests of others. These are the marks of the amateur spirit.

**BALANCED**.... Radio is a hobby, never interfering with duties owed to family, job, school or community.

(adapted from the original Amateur's Code, written by Paul M. Segal, W9EEA, in 1928)

RASA supports and promotes this ethos and ethics code.

# RASA & WIA Meet with ACMA

#### Cooperation

#### noun

1. the action or process of working together to the same end.

Many readers will be aware that RASA has been seeking *cooperation* with the WIA for some years.

Why would we do this?

Because we understand that RASA and the WIA essentially want to achieve the same ends... we want to protect and enhance amateur radio privileges for Australian amateurs, support the community and help grow the hobby.

Both associations share very similar objectives and goals in our respective constitutions. RASA recognises that *cooperation* will be more effective when dealing with the regulator and, of course, we can also share resources and initiatives.

We can "row in the same direction".

To date, the WIA has refused to *cooperate*. RASA and members of our committee have been regarded as *persona-non-grata* by some within the WIA. The WIA has lost focus; too many of its directors have lost sight of the association's objectives. They have achieved nothing for at least the last 10 years.

Instead of seeking **cooperation**, collaboration, and an open pragmatic relationship, some WIA directors are fuelled by hatred, vitriol, and a reluctance to accept RASA's existence. They are still angry over losing with Deed with the ACMA. (just ask them). We understand they are considering suing AMC for theft of IP....

But.... everything changed when Scott Williams VK3KJ joined the board. Scott opened a channel of informal communication with various office bearers on the RASA Management Team.

Relationships were formed and an environment of trust developed.

Finally, in late August 2022, WIA President Scott Williams VK3KJ, and RASA President Paul Anslow VK2APA agreed that in the spirit of *cooperation*, they would commence several initiatives for the betterment of the hobby. These included a number of joint meetings with ACMA, other stakeholders and interested parties.

One week later, the RASA and WIA Presidents attended a video conference with the ACMA to discuss topics of common interest. This meeting was a success, with the ACMA being especially impressed with this demonstrable example of *cooperation* between the WIA and RASA. Both Presidents assured the ACMA that this *cooperation* would continue.

Sadly, we are reliably informed that the WIA President discussed the above meetings and initiatives at a WIA Board meeting on 13<sup>th</sup> September 2022. Unfortunately, a majority of WIA Board members rejected their President's efforts to drive cultural change and seek *cooperation* between the WIA, RASA, AMC and the ACMA.

In spite of this, on Friday 16th September, Presidents wrote to the ACMA both requesting the use of the AX prefix to commemorate the life of Queen Elizabeth II from 19<sup>th</sup> – 23<sup>rd</sup> September. ACMA provided what can best be described as "pragmatic support for a worthwhile initiative", and this was communicated in a RASA bulletin later that same day. We understand the WIA President supports this initiative. but unfortunately his board and a small band of volunteers have overruled this positive initiative. Scott has no direct channel to communicate with WIA members or the broader community. The WIA Website, Facebook and WIA News are all controlled by people who do not share his vision.

Clearly, the ACMA understand that this is a worthwhile commemoration and are prepared to accommodate use of the AX Prefix for this world-wide out-pouring of support and unity for the late Queen Elizabeth II. Sadly, some on the WIA Board would rather create additional division and conflict. where an opportunity for cooperation and unity presented itself.

Scott Williams is a leader with integrity and vision; he genuinely wants to see positive change at the WIA. We understand that some on his board refuse to accept that the WIA lost the Deed with the ACMA, and regard AMC as *an enemy*. They refuse to accept the good work that RASA has delivered and our efforts to work *cooperatively*.

Scott has worked tirelessly to convince his fellow Board members that the WIA must modernise and create а culture of cooperation and reconciliation. He understands that the heady days of the 20<sup>th</sup> century and a monopoly are behind the WIA. The ACMA and the role of representation has changed, and we must recognise these changes and adapt.

Sadly, we understand Scott is unable to rely on his Vice President for support. He only holds a minority of support from one or two newer Directors, with aggression, bullying and combativeness characterising WIA Board culture.

Regrettably, it seems that any follow-up meeting between AMC, ACMA, WIA and RASA will be cancelled as the WIA Board have overruled their President's efforts of *cooperation*.

Even the WIA National News gaslights or censors these very real news stories... it really has become a voice-piece for the political interests of those who control the WIA.

All we can do is report these facts to the Australian Amateur Radio community.

Scott's voice has been muted by his board and those who control the WIA media. We maintain an informal channel of communications with Scott and will continue to support his efforts.

Whatever they may be.

Scott was contacted for comment prior to this article being published; his response indicated that he did not have the support of his board and that further efforts of cooperation were not possible at this time.

## Together we are stronger.





## **Class Licencing**

The ACMA continue their review of Licencing Conditions and have recently published a consultation paper.

It's probably fair to say that we'll be moved to a Class Licence sometime mid to late 2023.

We don't see a dramatic impact for amateur radio. A Class Licence will have little impact on day-to-day activities for most radio amateurs. The changes proposed by ACMA are summarised as follows:

- there will be no annual licence fee;
- interference protection and management will remain unchanged; QRM Guru is the best path to mitigating your local noise issues;
- EMC compliance will remain unchanged;
- callsign issue will be conducted by a 3<sup>rd</sup> party under contract to ACMA;
- ACMA will need to consider some form of online register of amateur callsigns, either directly or via a 3<sup>rd</sup> party;
- ACMA will need to provide a suitable certificate or wording on a certificate issued by a 3<sup>rd</sup> party for amateurs travelling overseas seeking reciprocal licencing rights; and
- ACMA (or a third party) will need to produce an operating procedures document.

RASA continues to actively engage ACMA on matters relating to the Class Licence and providing focus on the following areas:

#### Protection from Interference

RASA is the only national body that is actively working here in Australia to protect our bands from interference. We lobby ACMA to ensure our interference protection rights under the Radiocommunications Act are retained, and we promote the benefits of <u>QRM Guru</u> to ACMA.

We know that ACMA is more responsive to complaints that are supported with evidence and a properly documented submission. QRM Guru provides the framework for such submissions.

On the ground we continue to assist amateurs to hunt down and resolve local QRM issues. We present to clubs regularly and constantly seek feedback from fellow amateurs.

#### **Repeater and Beacon Assignments**

Existing legacy arrangements are out-dated, inefficient, chronically slow and exhibit a single point of failure. There are no performance management regimes, and we are aware of numerous complaints from clubs and individuals.

RASA has proposed a more equitable, transparent, and responsive service as a part of the recent consultation process with ACMA.

#### 50-54MHz for Standard Class Licencees

ACMA have indicated that it is considering granting the full six metre allocation to Standard Licensees.

#### 1kW for Advanced Amateurs

ACMA are considering higher power for Advanced Licensees and are seeking feedback from the sector.

#### Regulations & 2x1 Contest Callsigns

RASA won this new privilege, which was implemented in October 2021.

There has been some confusion in the VK community regarding the RASA DX Contest and the use of 2×1 Contest Callsigns. Some operators have been bullied and harassed over their use of the 2×1 contest callsigns.

RASA was instrumental in negotiating and gaining approval from the ACMA for 2×1 contest callsigns. We have maintained a close working relationship with the ACMA and AMC throughout the implementation of these callsigns.

Unfortunately, someone in the amateur community chose to formalise a complaint with the ACMA over the use of 2×1 contest callsigns in the RASA Contest. Following a preliminary enquiry by the ACMA, we understand they have decided not to investigate the matter further.

RASA has reviewed the complaint and sought further clarification from the ACMA's web site.

Information from the ACMA web site has confirmed our understanding that there are no regulations governing amateur radio contesting and the use of 2×1 contest callsigns. (other than you can only use these callsigns for contesting).

The ACMA advise that "In general, the ACMA's position is that non-regulatory administrative policy (the management of aspects of amateur radio that are not related directly to a statutory function) should be guided by the consensus view within the ramateur radio community."

https://www.acma.gov.au/sites/default/files/2 020-05/Fact-sheet-Amateur-radio-Regulatory-roles-and-responsibilities.pdf So, in a nutshell... those of you with a  $2 \times 1$  contest callsign are welcome to use it in any contest.

Let's hope this puts the matter to bed and we can all get on with enjoying the hobby.

With thanks to Mike VK3KTO for this QSL Card – from none other than G5RV.

82 Folders Lane, Burgess Hill, W. Sussers, England.		
G5RV		
K3KTO QSO on 244/1189 at 972 GMT 21 MHz.K55/ RST 57/8 LOUIS VARNEY GSRV FOCT RSARS765 RAOTA RSGB ARL EX ZARV (1927) •VP4RV - VP5RV · VP6RV · VP7RV - PJSAA - PJSCA - PXIRV - EP2RV - 078RV - 9Y4RV - 8F6DF - VK9LV - YJ8RV - FOORV - CX5RV - PY1ZAR - TUAAJ - E12VPL - G5RV/GC - Gi - GM - GW - F7 - PAO - il - T17 - LA - SM - OZ - DL - CT1 - EA8 - VP9 • W2 - VE3 - XE1 - TG9 - YS - T12 - HP1 - YY5 - HK3 - HC1 - OA4 - CE3 - LU - 9G1 - 5N2 - 5Z4 - 9J2 - 5U7 - XT2 - OD5 - VS6 - VK2 - 3 - 4 - 5 - ZP5 TH2, QSL - 73 Kouis		
10 Sept Seg		
Dean Muke, Many Kanka for the enjoyable peo & for your get. Very glad toknow that you like the GSRV antenne. My Life (Nélida) & I New, much enjoyed our several visets to VKLAile be seene loving in PNG 1970-72 & I STAR VKGLV. Le hade some good friends there to VK2, 3, 4 & S. I soil try to geo from CKSRV Dec to April Lotth our best writes to you & your family. Louis GSRV/OSRV/ BisRV		

Do you have a unique QSL card to share with our readers.... Please email us.

## ACMA Consultation on Class Licencing -Preliminary Comments

On the 29<sup>th</sup> September 2022 the ACMA published their most recent Consultation paper relating to Class Licensing. You can read it by following this <u>link</u>.

Here's our preliminary assessment and summary of the issues that we encourage all readers to consider.

The important precursor to this is the matter of WIA and RASA cooperation. It is greatly disappointing that the WIA Board has not supported their President in his efforts to cooperate. The ACMA have made it abundantly clear that they want to see sector consensus, and indeed, they were pleased when the two Presidents jointly met with them in September.

# Public register of call signs and amateur details

This is the ACMA online database that many of us use to look up a licensees details based on their callsign.

https://web.acma.gov.au/rrl/register\_search. main\_page

ACMA have considered a number of issues regarding the future requirements for a publicly accessible register of Amateur Radio Callsigns.

#### Summary:

ACMA does not see any requirement for them to maintain a public register of callsigns. It does not facilitate their primary role of Spectrum Management. They propose that the amateur community maintain its own register (or registers) or use an existing voluntary register. Existing registers can include internet services like www.qrz.com

#### Issues for consideration:

Amateurs will be able to control their data and who sees it. You can publish as much or as little information online about you and your callsign as you desire.

Amateurs will no longer have a mechanism for inspecting official records to establish the bone-fides of an amateur callsign. This has both positive and negative outcomes.

Self-appointed Band Cops will no longer know your level of qualification, and therefore, your band and power level privileges.

Amateurs will have less incentive to "do the right thing" if they can operate with complete anonymity.

Note that AMC will still maintain a public register of available callsigns.

# Other matters relating to callsigns include:

ACMA have said that:

"Applicants could request a call sign that does not align with their state/territory of residence, but would need to justify why such a call sign should be assigned."

Do we really want to deregulate the entire callsign template? Refer the article "Callsign Crisis" elsewhere in this issue of QTC.

Maximum number of callsigns to be held? There should be a limit of one 2x2 (i.e. VK1AA) callsign in VK2, 3 and 4. There should be a limit of one 2x1 Contest Callsign per individual (including any entities controlled by an individual)

AMC will send you a "polling" email every (3?) years to check you are still using your callsign. AMC will maintain procedures for callsign management, such as deceased amateurs, cancelling of callsigns, special event callsigns etc.

#### Amateur operating procedures

This is the ACMA published operating procedures document/s for amateur radio. https://www.acma.gov.au/amateur-radio-operating-procedures

ACMA regard operating procedures as a matter for the amateur radio community to develop and maintain. The ACMA would have no role in managing or enforcing compliance with the amateur operating procedures.

ACMA do not intend to establish a formal mechanism (such as a panel or committee) to facilitate such collaboration. This does not preclude members of the amateur community, if they see value in such a body, from forming one.

ACMA consider that views on the content of operating procedures and the process by which they might be developed are best directed to clubs and representative bodies.

The ACMA would have no role in managing or enforcing compliance with the amateur operating procedures.

#### Summary:

The ACMA wants to divest itself of this function. Amateur Radio Operating Procedures have no relevance to ACMA's primary responsibility of Spectrum Management. This is a matter they wish to devolve to the sector.

Sadly, the sector has illustrated it cannot collaborate, which is almost certainly contributing the ACMA's desire to remove themselves as much as possible from active involvement in operational matters.

As there is no desire to regulate or enforce said procedures, it places the sector in a rather difficult position. Who would write any new or updated operating procedures, where would they be stored and who would take action in the event of a breach?

#### Issues for consideration:

The ACMA are effectively removing Operating Procedures from their scope of responsibility. Operating Procedures will fall into the same category as existing "Gentlemen's agreements".

We raise the following as items for consideration.

• What is the minimum set of procedures required to support legislation and licensing?

• What questions would be included in the Regulations Exam?

• Who will set and maintain the Operating Procedures?

Would it be better to simply have AMC establish, publish and maintain Operating Procedures?

What is clear at present is that the sector cannot work to a consensus model.

#### Higher Power for Advanced Operators

RASA has maintained a consistent position on this matter for some years now. In summary:

AOCP(Advanced) Operators be permitted to transmit 1kW on all modes with the following conditions:

• Compliance with EMC Guidelines, located <u>here</u>.

• Evidence that the station complies with the guidelines.

• Completion of a short course illustrating competency in operating safely with higher power.

• A proposed Rule of Thumb – the exclusion zone around an antenna (1.8-29.99Mhz and transmitting greater than 100W) should be a minimum of three metres.

International reciprocity arrangements for Australian amateurs with Advanced qualifications travelling overseas

#### Proposed arrangements

In our response to submissions, we undertook to consult with CEPT on what arrangements could be put in place to ensure that international reciprocal arrangements were maintained.

Table 2 in Annex 4 of Recommendation TR 61-01 has been amended so that an AOCP (Advanced) (AOCP-A) is specified as also being equivalent to the CEPT licence. Currently, this means that Advanced amateurs can produce either their licence or their certificate to overseas regulators or customs officials. A note in the documents reads:

Australia is currently reviewing licensing arrangements and until a decision is made both are considered valid. The AOCP-A is issued by the Australian Maritime College. Older Advanced certificates issued in Australia are equivalent to the AOCP-A. The Australian Communications Media Authority and confirms equivalency in writing to operators on request.

Anyone holding older certificates of proficiency can contact us for letters confirming equivalence of older certificates, if necessary.

RASA sees no issue with what ACMA have proposed.

ACMA have also provided a list of questions, which are replicated below.

#### Consultation questions

1. Do you see any reason for not extending secondary user access to the 50–52 MHz band for Standard amateurs? If yes, what is your reason? (See section 3.)

2. What are your views on the proposed policy on call sign transfer? (See section 4.)

3. Will the proposed 'regular check' – to confirm whether a person is still using their call sign – be a sufficient method of ensuring there are enough call

signs (in combination with other factors, for example, the high number of available call signs, deceased amateurs, most amateurs only wishing to hold one call sign)? (See section 4.)

4. What are the benefits or disadvantages of our proposal not to limit the number of call signs that may be assigned to a person? (See section 4.)

5. Do you have any concerns with the other proposed call sign management arrangements? If so, what are they? (See section 4.)

6. In the absence of amateur and station information being contained in the Register of Radiocommunications Licences, are there any amateur-operated registers or other existing voluntary registers that you would use? (See section 5.)

7. Do you anticipate any difficulties operating your station in Conference of Postal and Telecommunications Administrations signatory countries? (See section 5.)

8. What are your views on the proposal to allow Advanced amateurs to apply for assigned scientific licences for certain experimentation uses, such as reflecting signals from a celestial body as well as inter-continental ionospheric and trans-equatorial propagation experiments? (See section 6.)

9. Noting the proposal mentioned in 8, are there other amateur experimentation uses that require higher power that you think should also be considered under assigned scientific licensing arrangements? (See section 6.)

10. What are your views on the medium-term proposal to allow Advanced amateurs to apply for authorisation for other higher power use-cases under certain conditions? Please provide brief information to help us understand your view. (See section 6.)

11. Is a 1kW power limit appropriate? Why or why not? If not, what alternative do you propose and why? (See section 6.)

12. Are there particular bands that you consider should or should not be able to be accessed for Advanced amateur higher power operations? Which band(s) and why? (See section 6.)

13. What use-cases would require stations to operate at power limits for Advanced amateurs higher than the 400W currently permitted? (See section 6.)

14. For each use-case mentioned in 13, please briefly answer:

a. Why is a higher power limit needed?

b. What are the specific limitations of the current power limit?

c. What power level is required?

d. What is the technical description of this power level requirements (for example, transmitter output power, emission mode)?

e. What amateur service frequency bands would be used?

f. How often will a higher power level be required?

g. What is the location of the station?

15. Should potential higher power authorisations be limited by location, position, event or something else? (See section 6.) Please provide details to support your answer.

#### *Guidance on providing feedback*

Submissions from clubs and representative bodies

When we receive a submission from a club or representative body, we consider that the submission represents the views of its members.

We do not require submissions from individual club or representative body members expressing support for their clubs or representative body submission.

If a member of a club or representative body holds a view that significantly departs from that of their club or representative body, they should make a separate submission.

#### Pro-forma submissions

Amateurs wanting to use a pro-forma should add their signature to a *single* pro-forma or a *single* petition.

Processing large quantities of identical or near-identical pro forma submissions will delay progress; your cooperation is appreciated.

RASA will be preparing а detailed submission and we'll share it with you in the We'll also be December edition of QTC. seekina WIA reaching out to the cooperation, even suggesting joint а response.

If you have any questions or comments, please send us an email.

## History in the making?

WA Amateur Radio News hosted PerthTech recently (22 October) in Gidgegannup, about 50km North-East of Perth.

This technical symposium was a great success, with over 12 excellent presentations.

A highlight of the event was a joint session by the Presidents of RASA and the WIA, Paul Anslow VK2APA and Scott Williams VK3KJ.

Paul and Scott shared a meal prior to PerthTech and discovered their talking points were virtually identical. As such, they decided to deliver a joint presentation.

Paul and Scott assumed an informal approach to their presentation, seated sideby-side in front of the 65 attendees. They provided a summary of what they saw as being the roles of both organisations and how much they have in common.



It was clear Scott and Paul had a solid working relationship and wanted their respective organisations to work far more cooperatively for the betterment of the hobby.

Their talking points were:

- Amateur Radio should not be politicised
- Conduct like bullying, harassment, vilification, victimisation have no place in

this hobby, and we must have zero tolerance to this. It is up to us all to uphold this commitment and stamp out any conduct that either does or has the potential to bring our hobby into disrepute.

- The next generation of amateurs where are they coming from? Both Scott and Paul noted that anyone visiting social media (especially the large Amateur (Ham) Radio Facebook page) would more than likely be put off the hobby.
- We must embrace inclusivity and diversity at every opportunity
- We must enjoy what we do and "smell the roses".. and to do this effectively we must get along.
- Division must cease and both the WIA and RASA must find a way to cooperate for the benefit of the hobby.

Both Presidents noted that ACMA are working through a Class Licencing consultation process. They agreed that a collaborative response would give the sector the best chance of our interests being achieved.

Some questions from the audience related to combative and detrimental opinion pieces in a recent WIA National News broadcast.

Scott acknowledged the issue and advised that the WIA had "strong personalities" with a controlling influence.

On a number of occasions Scott concluded an answer to a questions with the phrase: "You may think I'm avoiding the question"... and left it to the audience to interpret his meaning.... Scott also informed attendees "I am not here on official WIA business".

Scott made some very important comments in response to a question about social media behaviour that there are "senior influencers" in the hobby who are bringing it into disrepute. Scott and Paul both acknowledged that the bullying and vilification must cease.

Paul repeatedly confirmed RASA's commitment to promoting a culture of cooperation and collaboration.

It was noted that the WIA continues to promote itself as working in isolation and an unwillingness to engage with RASA. Scott was asked how the influencers in the WIA could be convinced to work in a more collaborative fashion. Again, Scott's answer related to the WIA Board as being made up of "influencers" and individuals elected by the members.

Scott encouraged all WIA members to take a far greater interest in elections and operation of the WIA. He reminded members that WIA Directors represent *them*, and that members should read candidate bios, manifestos, social media posts and professional experience before completing the ballot card.

In closing their session, the WIA President noted:

"The current status of the hobby is not sustainable, and change is needed. There needs to be a cultural shift in our thinking and that saying rings very true.......keep doing the same thing and you will get the same outcome."

This sentiment was echoed by RASA President, Paul VK2APA.

There was much discussion and positive feedback following this presentation, and Scott in particular, received considerable support and encouragement from attendees.

We look forward to hearing more information from the Presidents in the future editions of QTC.

#### Letter to the Editor - QTC magazine

Dear sir,

As licensed amateurs, we are attracted to this hobby due to its basis of friendliness and cooperation.

It saddens us then to share with your readers that the administrator of the VK-DMR network has blocked members of the Bayside District Amateur Radio Society from the VK-DMR network.

The alleged reason is the way our club has configured its own digital repeater, a repeater which is owned and maintained by the club. We have debated this with the administrator to no avail.

Our wish in making this issue public is to ask RASA and its members to appeal to the VK-DMR leadership to cease singling out amateurs simply based on whatever club they belong to.

Kind regards, Mark VK4BBC President, Bayside District Amateur Radio Society

Phil Hutchings VK4PG Secretary, Bayside District Amateur Radio Society

## **Callsign Crisis?**

Most amateurs care about callsigns. Our callsign structures are important to us and have a 90-year history.

Last year the ACMA made significant changes to the 3-letter callsign suffix – all licence classes now have access to three letter callsigns. The only callsign type to retain a specific licence class linkage is the 2-letter and 1 letter suffixes; these are only available to Advanced Ops.

What hasn't been as widely understood is the impact of removing the 90-year tradition of the callsign number alignment with your state of residence. (e.g. VK2 = NSW, VK3 = NSW, VK4 = QLD, etc).

ACMA have decided that if you move to a new State/Territory, you can take your existing callsign with you – you don't need to apply for a new one to match your new QTH. A VK8 could be in Sydney, a VK7 in Townsville.

"So what?", some may ask.

Well, Australia is a very large country that spans two DX Zones (29 & 30), as well as hosting a number of rare and highly sought after DXCC entities (VK9 and VK0).

Indeed, VK9 alone offers six unique DXCC entities. (Lord Howe Isl, Norfolk Isl, Willis Isl, Mellish Reef, Christmas Isl and Cocos Keeling)

To many DX stations, even working a VK8 is a rare and sought-after contact.

Of course, callsign numbers are important to DX and Awards chasers. Imagine an EU or NA station chasing their first Zone 29 contact. They hear a VK6 calling CQ and spend some time working the pileup to get the VK6 in the log... only to find later that the VK6 operator now lives in Sydney.

The same goes for VK9, VK0 and VK8.

We have VK0 & VK9 callsigns held by clubs/individuals who have never been to VK0 or VK9 and (to the best of our knowledge) have no approved plans to visit these entities.

Yet they have been able to acquire these callsigns and renew them annually. They could start using those callsigns in any mainland location tomorrow.

This situation will undermine award systems... an overseas operator claims a new zone or DXCC entity to find that the VK6 he worked now lives in Sydney or the VK0 is actually in Perth.

Who is responsible – the VK operator? The Awards administrator? Or the poor DXer who has just "worked a new one?"

All of this is quite unnecessary, really.

Locally, portable and mobile ops use callsign numbers to establish the direction and indicative distance when they hear a station calling CQ. This has an impact on how an operator might assess band conditions and adjust their beam headings; especially important for VHF and UHF Dxers.

"Did I just struggle through a six-metre 339 SSB QSO with VK6 in Perth, or was he just 50kms down the road (pointing west) from me here in South Melbourne?"

ACMA have made these changes without any sector consultation. In recent times we have seen very inconsistent policy settings from the regulator. Some changes, like this one, are applied with no consultation, whilst others are subject to selective consultation with special interest groups only.

Just recently, ACMA consulted the sector on something as fundamental as the suffixes "PAN" and "SOS"; their question being "should these be on the restricted list or available for general use?". A clearly unnecessary question for anyone who understands the International Radio Regulations....

This change to callsign numbers went through with NO community consultation whatsoever; yet it is probably one of the most far-reaching changes we've seen in the last 50 years.

The WIA's "callsign for life" recommendation gave no consideration to callsign numerics. At the time the focus appeared to be solely on the three-letter suffix only.

#### https://www.wia.org.au/newsevents/news/20 20/20200203-1/index.php

RASA conducted a survey on the topic of callsign numerics. 71% of respondents wanted to see the numeral and state/territory linkage retained.

#### https://vkradioamateurs.org/callsignnumeric-identifier-survey-results/

Some of you may say... "*well, callsigns no longer matter in NZ or the USA*" and that is true. We don't live in NZ or the USA, and contrary to what some may think, we're not (yet) the 51<sup>st</sup> state.

If we aren't careful, we could see compete callsign deregulation with the Class Licence rollout, mooted for mid-2023.

#### Where to next?

We see three options:

#### Option 1

Reimplement the linkage between callsign numeric and State/Territory. (VK1=ACT, VK2=NSW, VK3=Vic, VK4=QLD, etc). Grand-father anyone who has moved and chosen to take their callsign with them.

#### Option 2

Combine mainland Australia and Tasmania into one group. i.e. VK1-VK8 allocated for mainland Australia and Tasmania). No matter where you live on mainland Australia or Tasmania, you could apply for a callsign with any prefix VK1-VK8. VK9 and VK0 Islands and Territories to maintain their status as being only for stations permanently or temporarily (holidays or DXpeditions) located on the external territory. Proof of residency or intent to visit would be required. The callsign would be forfeited for temporary visitors on conclusion of their stay.

#### Option 3

Deregulate callsign templates entirely. No matter where you live in Australia, any VK0-9 prefix would be available to you. VK0XX could be in Sydney. VK9NFI could be in Perth. This option would completely undermine a system that has worked well for us in Australia, as well as those around the world for over 90 years.

Club Presidents and Secretaries: please discuss these topics at your meetings and forward this to your members. This matter is above AR politics.

There is little doubt now that the ACMA is looking for further deregulation and a "hands off" approach with Class Licensing. If this trend continues, we'll see the continued deregulation of callsign templates.

If "we" don't do anything, then nothing will change. It's now up to RASA, the WIA and the amateurs of Australia to work collaboratively if we want to see the linkage between callsign numerics and station location retained.

We have written to the WIA seeking their views on this important matter.

You can read more by clicking these links. https://vkradioamateurs.org/callsignnumeric-identifiers/ April 2020

https://vkradioamateurs.org/callsignnumeric-identifier-survey-results/ April 2020

https://vkradioamateurs.org/whats-in-acallsign-numeric-state-identifiers/ QTC November 2022 March 2020

https://vkradioamateurs.org/how-aboutsome-cooperation/ Jan 2021

https://vkradioamateurs.org/new-callsigntemplate-from-30th-july-2020/ Aug 2020

https://www.wia.org.au/newsevents/news/20 21/20210119-1/index.php Jan 2021 https://www.wia.org.au/newsevents/news/20 20/20200806-1/index.php Aug 2020

https://www.wia.org.au/newsevents/news/20 20/20200203-1/index.php Feb 2020

# 2023 Membership update - FREE MEMBERSHIP RENEWALS

Membership renewals are due in September 2022. At RASA we are always looking for how we can be innovative and introduce new approaches to representation.

Our finances are strong and we have decided to trial a one year free renewal for all existing members. New member fees remain unchanged at \$10.

Instead of paying renewals, we're asking our members and supporters to donate to help with our work. Since our formation we have been overwhelmed with the support and donations we receive from members and clubs. Your donations fund our web sites, back-end collaboration and business tools such as membership and accounting packages, online magazine publishing, and Zoom - which we make available for members to use.

We also provide support for VK contests, sponsor club events and provide hard-copy Welcome Packs for clubs, educators, and assessors.

We have a RASA callsign (VK2RAS), Reverse Beacon Network node (VK3RASA) and a DMR repeater (VK3RAA) which we maintain and support.

Our QRM Guru resource is funded via the sale of our QRM Kill Kits, but we'd like to

improve the back-end web site, and this will require funding.

RASA's annual operating budget sits at about \$3,500 per year.

Our vision is to fund the work we do via donations only. All of our services and resources are free for amateurs everywhere (with the exception of QRM Guru kits). If you're able to make a one-off donation or a regular monthly donation you'd be helping us achieve this vision.

A regular monthly contribution of a few dollars adds up and really helps us. Equally, a more generous one-off donation gives the bank balance a boost.

If you'd like to make a donation, please head over to this <u>page</u>. Our bank details and a paypal button make it easy.

On behalf of the RASA committee and everyone who uses our resources, thanks for your support. If you have questions please send an <u>email</u> to our Treasurer.

## How to fix stuff

#### By lan Jackson VK3BUF

We are surrounded by stuff. Sooner or later an item of equipment will land in front of you that does not work. Somehow it becomes your responsibility to make it work again. A systematic approach helps.



Even though the tips described here mostly relate to electrical and electronic equipment, the methodology can be applied to most circumstances, whether it be a transceiver, coffee pot or a lawnmower.

It is all about figuring out how to make broken devices work again.

# Where is the "Not Worth Repairing" threshold?

Most objects have a threshold where repair is not viable. This may be affected by replacement costs. It is impractical to spend \$10 on glue to repair the broken handle on a \$5 coffee cup – unless that cup has some sentimental value. Circumstances can affect motivation beyond financial considerations. If your vehicle has broken down and you are stranded, there is a strong incentive to identify the fault and make repairs. The financial cost may be irrelevant.

Sometimes I get involved in repairing farm machinery. More than once a distressed

farmer has sought advice on a defective tractor module after being told repair would take 3 months and cost \$6,000. Often the real fault is a defective ten cent diode or similar, but dealers will rarely make that type of assessment. While it would be nice to live in a world where the first solution to every problem is to buy a new one, this is both financially impractical and sustainably irresponsible.

#### How much time are we looking at?

Decide early-on how much time and money you are willing to commit to the repair. Perhaps it is an issue that can be resolved in an hour, but you may get drawn into a project that takes months to resolve.

Sometimes is it difficult to determine if an item can be repaired without first undertaking a preliminary assessment. It is always a good move to clean the damaged area to properly ascertain how big the issue is. Problems often don't look quite so daunting after the mud, corrosion, or "black stuff" has been removed.

Conceivably, a circuit board could have just a blown fuse, or trashed a microprocessor holding unobtainable software. One fault is easy to repair, the other is practically impossible, but both could exhibit the same symptoms. Try to decide in advance how much time you are willing to invest in this problem before proceeding.

# Ask questions about how it is supposed to work. Gather the clues.

How long had it worked? Did the system or object ever work properly? Under what circumstances did it fail? What you may think is a fault, could be part of normal operation, or nothing more than an incorrect configuration setting.

#### Did the item ever work?

There is another perspective to be mindful of. Whenever performing a repair there is usually an expectation that the original design worked.

It is difficult to repair an item where you are not just battling a fault, you are fighting with an inherently poor design.

A repair should not have to dip into somebody else's inherently flawed product design. Still, this sometimes happens.

In 2019 I had about twenty LED strip light replacements for 4-foot fluorescent tubes. They all worked well for 2 to 6 months and then progressively failed.



These SMD resistors would overheat and de-solder

It turned out that they used underrated surface mount resistors that were sweating at 100° C.

Eventually, the solder would go soft, and the parts fell off the board. I replaced the tiny SMD resistors with ¼ watt pigtail versions and they've not failed since. This sort of thing can happen in appliances designed for Chinese 220V supplies but will slowly cook on Australia's 240-250V mains.

#### If it never worked before...

Work through a logical process:

• Look for components that were not soldered correctly or are perhaps missing outright. If a circuit board is accessible, hold it up against a bright light. If a through-hole component is missing solder, light will shine through the hole. With surface mount parts, you may need a good magnifying glass, but give the board a good visual inspection to ensure that all SMD parts have been soldered on all pads.

• Does the software match the chip? This one may seem a bit silly, but if the microprocessor is supposed to be an antenna tuner but has been accidentally programmed as an alarm clock, then the device is never going to work. Ensure that your software matches your hardware. Also, ensure that the chips are exactly right and not a similar, but incompatible variant. I once found out the hard way that the ATtiny2313 and ATtiny2313A microprocessors are *not* interchangeable.



2313 and 2313A are not interchangable

Look for parts that are in backwards. Check all ICs to ensure that all the Pin 1 dots or bevelled edges align with the Pin 1 footprint or IC socket. A common construction error is to fit electrolytic capacitors in backwards, so that the minus (-) sign on the part is next to the (+) symbol on the circuit board. Reversed components tend to pull more current than they should. Voltage regulators run hot and sometimes fuses blow. Inspection under an infrared camera will reveal hotspots. An alternative is to put your finger on each part (if it is a low voltage circuit!) and see if it is hot to the Generally touch. anything that is uncomfortably hot to touch (>60°) is probably a bad sign.

• Did two components get swapped during assembly? A voltage regulator and a transistor can look the same. A small distraction during component selection and

installation may result in failure. Perhaps you were supplied with a 25V capacitor when the correct rating was 35V. Where parts have been substituted, it can be hard to spot.

The finished board will look great, but it won't work. Use a magnifying glass and double check part numbers.

• Are bits touching other bits where they shouldn't? Sometimes through-hole components and wires haven't been cut back flush with the underside of a circuit board. When the board is assembled in its case, the wires hang down and short to the enclosure.

• If you lost a nut or screw during assembly, look for it. Loose bits of metal floating around under circuit boards is a recipe for disaster. Where there are larger semiconductors that mount to heatsinks via insulating washers and tabs, ensure they were assembled correctly. An ohm meter can be used to quickly check for shorts between heatsinks and component tabs that are supposed to be electrically insulated.

#### **Observation vs Investigation**

This is a really important aspect of fault diagnosis. There are two distinct approaches to repairing an object. One is **Observation**, where you may not know much about the damaged object, but you are going to have a look and a poke around to see if something stands out.



Check connectors!

The second approach is **Investigation**, where you put your headspace in diagnostic mode, document symptoms, inspect circuit diagrams and undertake component level testing until the offending component is identified.

There is a danger in getting trapped in one approach only. I have seen technicians waste days on a fault, only to have someone come along and say, "Hey this plug looks like it has fallen out of its socket."

Good repairers learn that both strategies are effective, and you should use them in parallel.

#### Observation

Being observant is a ritual of poking around and looking for the unusual. You are looking to see if something is hot, cold, wet, cracked, loose, missing, corroded, smelly or If it looks ok, then go deeper. broken. Shake things, open things up and peer inside. Wriggle wires on terminals to see if they move. Unplug connectors and look for signs of melting, black marks, or corrosion. Shift your viewpoint, look under and from behind. You may find something hanging down that shouldn't be there. It is not just visual. Touch will alert you if things are hot, or cold when they should be hot. A gentle shake may reveal an unwelcome rattle.

On circuit boards, check out individual components. They shouldn't have cracks, holes, bulges, or movement. Use a knitting needle or other non-conductive stick to wriggle the parts. A lose component can mean a broken leg, dry solder joint, or on the reverse side the pad has lifted and broken away from the copper track.

Checking fuses. Isolate the power source and place an ohm meter or continuity tester across all the fuses you can see. Don't just rely just on visual inspection. Vibration can damage fuses. If you see a surface mount component with a designator of FZ it is probably a fuse and can be checked the same way. Not all fuses are obvious.

A classic fault that gives all kinds of funky symptoms are electrolytic capacitors that have dried out over time. A bulging capacitor is a symptom that it is faulty.

A faulty capacitor may fail to provide the filtering function thereby permitting noise to effect delicate circuits. In the adjacent image we can see two power modules that deliver 24V from 240V AC. The one on the left is fine, but on the right, we can see that the capacitor has bulged at the top and heated up its label. The capacitor has leaked and no longer works. Have a quick look for this 'bulging capacitor' symptom in lots of capacitors, anv module with particularly switch mode power supplies.



Bulging capacitors are a clear sign of problems

#### **Bad soldering**

Electronic circuits are only as good as their soldered connections. In mass production, components are exposed to a solder fountain. This can leave smaller connections looking good but larger parts may be underheated and poorly bonded.

When traditional tin-lead solder was used good connections tended to have a clean shine, while bad ones had a frosty look. Unfortunately, with the advent of lead-free solder, most connections can have a frosty look and dry solder joints and cracks can be harder to find. If you can localise an intermittent fault to an area of a board, consider re-heating all components, using a little fine solder in order to add flux and let the joins re-bond.



In the above example a truck dashboard was losing its display with every bump. A replacement dashboard was worth about \$3,000, so investing some diagnostic effort was justified. When inspected under a microscope, the fault turned out to be a single poor solder connection, with a crack around the pigtail. You can see the frosty lead-free look of the solder surface.

#### Watch and Learn

Be patient in your observations and look for patterns that may not be immediately obvious. Recently I attended a large Computerised Numerical Control (CNC) Mill that was selecting the wrong tool from the carousel. Everything appeared fine and the sensors on the carousel head detected movement perfectly.



This mill had peculiar symptoms

When we told the system to choose another tool, it would ka-chunk a few times and select the wrong one. I spent 30 minutes just playing with it and watching the actions. It would always select Tool 1 ok. If I was on Tool 5 and wanted Tool 3 it gave me Tool 7. Tell it to go back to Tool 5 and it gave me Tool 9. All of this seemed a bit nutty at first, but a pattern emerged.

The machine would always try to select the shortest path between any two tools, but the head was always rotating the wrong way! The machine was fine, but the carousel motor was a three-phase motor and two of the phases were swapped. Transposing two wires at the mains plug fixed the problem.

It was misleading because the rest of the motors used Pulse Width Modulation (PWM) drives that were unaffected by phase orientation. The fault didn't show up on any self-diagnostics.

Not all facts are immediately evident. It's hard to detect what's abnormal if you have never seen normal operation. Be prepared to sit, watch, and take notes before diving in with tools.

#### Investigation (if only I had a circuit)

Deep investigation is the process of inspection and discovering at what point it fails. The job is harder if there is no circuit diagram. You may get lucky with an internet search, but you probably won't have a diagram unless you make one yourself. It is unlikely that you will have the time to trace every track and part unless time is no object. Get some paper and draw what you know. Maybe motor or power connections are a good start.

A very smart man told me recently '*If you* don't know what to do next, poke it with a stick'. A useful idiom. Try different things. Perhaps you will discover that the item is not totally dead.

# The more drastic the symptom, the easier the fault is to find.

This may seem to be an incongruous statement and it won't always hold true, but it is a good generalisation. A blown fuse, a bad connector. A damaged output semiconductor. Experience has shown that it is the smaller, *more subtle* (or intermittent) faults which are hardest to find.

#### Where to begin

A large, unfamiliar system that doesn't work can seem overwhelming. An effective faultfinding process which may seem obvious, but is often overlooked, is the act of "divide and eliminate". Break the problem into sections that work and those that don't. Keep dividing the problem into smaller units and sub-units. Zoom in and repeat. If you have the luxury of working spares or an operational system as a reference, you can progressively swap out parts with your working samples until you have located the defect. This may require replacing an IC with a socket to enable the easy exchange of components.

#### Locating Intermittent faults.

This is the classic scenario where the perfectly svstem behaves when the technician is present but plays up again five minutes after they leave. Intermittent faults are harder to resolve than a complete systems failure. Getting an intermittent problem to occur on-cue can be a challenge. The trigger for an intermittent fault may be mechanical where it is tied to vibration or movement. It may be time based, where it only occurs at a certain time of day, or it may environmental. where be it takes а temperature shift to trigger the fault. Identifying the fault requires those conditions to be replicated.



Wiring loom faults in vehicles can be very difficult to locate

Intermittent blowing of fuses poses special problems. Maybe it only occurs rarely. A trick that is particularly useful in automotive situations is to temporarily replace the fuse with a high wattage light globe, like a 50 watt halogen lamp. When the fault manifests, the lamp takes the load, protecting the wires.

Next, turn on an AM radio and tune low between the stations, with the volume turned up. When the fault occurs, you will hear a static on the receiver. Systematically shake different parts of the vehicle or system and listen for maximum static until you get near the fault. This is a great method where a wire has worn through its insulation and is intermittently shorting to the chassis.

#### Is it a Software fault or a hardware fault?

This may seem like an obvious issue to check, but the cause can be subtle. The symptom may be big. A motor doesn't start, or a key system appears dead. It is easy to waste a lot of time inspecting relays, MOSFETs and fuses. All of those items may be working perfectly, but a software setting somewhere is telling the unit to not to run. This may well be near impossible to prove without original system information and manuals. This is often what happens when problems caused by faulty sensors, or their connections. The system has lost contact with an important sensor and refuses to function. *Check all of your inputs before checking your outputs*.

#### Can you borrow a working unit?

Exchanging the faulty unit with an identical working unit can speed up the fault-finding process. If the fault remains, then you are either looking at the wrong module, or there is more than one fault. Be aware that the good module could be damaged by placing it in a faulty machine.

#### The A-B test method

Another strategy that will sometimes help is a low-risk option called the A-B test.

Place both the good and the bad module on a workbench, being careful to note the suspect module so that they are not mixed up!

Locate the negative or common ground connection on both modules. If necessary, look up the data sheet of a chip on the board to identify the negative rail. Connect the two negatives together and connect a second clip lead to a multi-meter. Set it to the ohms range. Now progressively check the resistance from every external electrical connection relative to the ground on both boards.



Comparing good and bad boards is a good approach

If the board has a hardware fault, then you may see a large variation in resistance between a good and a bad module.

The location with the highest variation in resistance is likely to be nearest the site of the faulty part. If the connectors don't yield results, repeat the exercise comparing each pin on the largest IC you can find on each board. This non-invasive, passive test is fast and can sometimes pick up faults in parts that appear to be intact but may otherwise be very difficult to diagnose.

# Be aware that experts often look in all the wrong places

A friend had a ford sedan that stalled intermittently so he took it to the dealer. They made him change leads, injectors and all sorts of things which didn't help. He accumulated \$1,000 in costs over a year before the dealer advised that "maybe it could be electrical". Then they quoted him \$1,500 just to try out a changeover engine management module. The sad story was relayed to me over a cup of coffee. We decided inspect the ECU box. The module seemed fine, so we powered up a soldering iron and re-heated every joint on the board. This took about 20 minutes and cost nothing but the effort. The fault disappeared and never returned.

This story demonstrates that often so-called "professionals" will take the easy way out by simply replacing everything until the fault is resolved – regardless of the cost and inconvenience to the owner. By all means, consult with professionals, as modern systems are quite complex, but continue to maintain a healthy scepticism for what you are told. Ask lots of hard questions. Make them work!

#### A special note on water damage

There will be times when equipment gets drowned. Extreme weather in NSW and Victoria has taken its toll on a lot of expensive equipment recently. What's to be done? Something gets wet and is put aside to dry out. A few days later it seems to work fine. A few days after that, it fails forever.

First up, don't operate it while it's still wet. Terminals and components will fizz up and dissolve through galvanic action. Copper parts can disappear in just a few hours.



If your electronics gets wet, you must treat it FAST or it WILL get worse

Steps should be taken while the board is still wet. First find a suitable container, such as a bucket, and then and put in a litre or so of methylated spirit. Give it a good flush, particularly around connectors.

The moisture will be absorbed by the alcohol and residues should evaporate cleanly afterwards.

Water on its own will cause a pcb to develop frosty green oxides that WILL kill your device. If you see any such residues, scrub them with a toothbrush (not yours) and some alcohol, or better yet, acetone. As we see in the above image, wherever there are golf courses near lakes, there will always be submerged electric golf buggies requiring a bit of extra attention.

# Internet searches – Has someone else already fixed this problem?

The internet can be your friend. Someone else may have experienced a similar problem and identified a solution. Find part or model numbers and do some internet searches. Add the word "fault" to the search. Sometimes you can turn up a reference that will take you directly to a solution, saving a lot of time. This is a particularly useful approach for automotive and white goods.

#### Part numbers tell a story

Mystery circuit boards can be difficult to understand. A good start is to note the part numbers for several of the ICs.

Most data sheets are going to run to ten or twenty pages, but the first two pages show a description and the pinouts can tell you a lot about the component. Scroll deeper into a data sheet and often there will be application notes and a circuit with typical values of the supporting components. This information can be gold where components on the circuit board have turned black and lost their markings, or you are working with surface mount parts that had little or no markings to begin with.

#### Tools maketh the man

The availability of appropriate tools greatly improves your chances of success. Wherever I travel in the world, I have a small pouch with a couple of small screwdrivers, tape, pliers, cutters, a small shifter, a couple of clip leads, cable ties and a compact, inexpensive multi-meter. Perhaps it is just for checking a camera battery or repairing a broken item of luggage. A little \$60 tool kit can save the day. When you travel, you must expect the unexpected.

#### Fixing Stuff is a big subject

The business fixing stuff is a big topic – larger than can be fully conveyed by this introductory article. Servicing equipment is a skill set and like all skill sets, abilities will improve with practise. We are now surrounded by more gadgets, toys, and appliances than at any point in history. Being able to make basic repairs to the things that we all use is more than just nice to do. It has become an urban survival skill. When something develops a fault, try to fix it first.

## The Truth will set you free

This is a necessarily long article. Committee debated over the need to publish this material, but given the poor relationship between the WIA and RASA, and the impact this is having on the broader AR community, we felt that sharing these facts was important.

Following PerthTech it is now clear the WIA and RASA Presidents (and all the RASA Committee) have a strong desire to cooperate and collaborate for the good of the hobby. It appears that some on the WIA Board and other key WIA volunteers, including those who control the news services, do not share these aspirations.

We are also somewhat confused that there is nothing about PerthTech or the meetings between Scott and Paul in the WIA News (30 October)... more gaslighting by the WIA?

There has been much going on behind the scenes with the WIA and RASA in recent months, and it really is pivotal to many important aspects of our hobby. Aspects like education, ACMA policy settings, Class Licensing, high power, callsigns, promotion of the hobby, the club scene, collaboration and perhaps most importantly, fostering a friendly and collegiate environment.

We understand that some people have no interest in matters of politics and prefer to avoid the uncomfortable reality that faces our hobby in the coming few years. But we encourage you to read on... it might just help you understand why politics matter.

For many months WIA President Scott Williams VK3KJ has been making some very brave efforts to address many of the weaknesses and shortcomings with his board and the inner workings of WIA. Some of these issues include:

- a lack of professionalism and impartiality when making decisions in the interests of the broader amateur radio community;
- addressing censorship and discrimination with the WIA National News and AR Magazine;
- discrimination and vilification by certain influencers with his organisation;
- accepting that the WIA lost the Deed with the ACMA... moving on and attempting to build a solid working relationship with the AMC;
- focussing on things that are relevant to the WIA and beneficial to the hobby; and,
- accepting the reality that RASA exists, is doing good work and that by working together we'll achieve great things for the hobby.

Somewhat sadly, Scott has been fighting against a tsunami of resistance and an unwillingness to work for the benefit of the hobby at large.

Most recently, Scott met with RASA, ACMA and other stakeholders to explore avenues for cooperation.

This appears to have been a bridge too far for some on the WIA Board and those in influential support roles. We understand these efforts have been thwarted by Scott's board. And none of this important news has made the WIA News Service.... Why not?...

In a recent WIA National News broadcast (25th September), there appeared to be some form of collective psychotic break by contributors.

https://www.wia.org.au/members/broadcast/ wianews/display.php?file\_id=wianews-2022-09-25

The bulletin was full of emotive language such as "STILL the war against the WIA goes on", "the WIA clarifying this illegality of using AX", and "splinter AR group".

There was even the ambit claim that:

"the ACMA has itself contributed directly to making dealing with the radio community more difficult and divisive by giving seemingly unwarranted credibility to a splinter AR group with a comparatively small member base.

In fact the ACMA actually mistakenly referred to them as an alternative peak body to the WIA, although they quickly walked this back. "

Given this somewhat amusing, but very damaging campaign of vitriol by a controlling faction within the WIA, it's important that the facts of the matter be placed on record.

Let's set some context first. This is not about WIA bashing. It's about presenting the truth and highlighting how the negative and destructive culture of *some* people within the WIA is setting the hobby back, and directly disadvantaging amateurs across Australia.

There are no winners when key players at the WIA place greater emphasis on censorship, discrimination, and misinformation than on the truth.

Let's begin with the WIA National News.

The first item of news (25<sup>th</sup> September 2022) related to the recent use of the AX Prefix to commemorate the life of the late Queen Elizabeth II. This is covered off elsewhere in this edition of QTC, so we won't recount it here, other than to say the intent of the message from the ACMA was clear.

The ACMA were sympathetic to a joint request from the WIA and RASA Presidents to use the AX Prefix between 19<sup>th</sup> and 23<sup>rd</sup> September 2022. The ACMA went out of their way to permit the use of the AX prefix by making it clear they would not pursue

regulatory action on anyone choosing to use it.

This was the most pragmatic solution given such short notice under existing AX arrangements. Importantly, it **illustrated what can happen when both representative bodies show unity and cooperation.** The email chain is reproduced here:

https://vkradioamateurs.org/wia-and-rasasupport-of-the-ax-prefix/

RASA shared this news with VK amateurs, who were then able to make their own decision based on ACMA's message.

Many Australian Amateurs exchanged the AX for VK prefix between the 19<sup>th</sup> – 23<sup>rd</sup> September and none have been charged, or even queried, by the ACMA.

So, to the news readers who like to consider themselves "band cops" and "bush lawyers", all you've managed to do is take the shine off a solemn but appropriate commemorative event and most likely annoy the ACMA.

And let's not forget, the **ACMA is the regulator**. Not the WIA, and not RASA. And certainly not "Harry" on your local 2m repeater.

Moving along to the next insightful segment of denial and misinformation.

Greg Kelly VK2GPK opens his spiel by noting the WIA is 112 years old and is the "sole Australian National organisation of radio amateurs recognised internationally by the IARU".

As far as being the sole organisation recognised by the IARU... well, that's an accident of history combined with a constitutional requirement that limits IARU membership to only one organisation per country. If the IARU constitution allowed membership from more than one representative organisation per country, RASA would also be a member....

The WIA isn't affiliated with the IARU by way of any technical merit or performance achievements... they were simply the only kid in line when IARU called for members. And, in reality, they've achieved nothing for Australian amateurs by way of their IARU association in the last 10 years.

Other than reporting "we attended meetings in <insert exotic foreign destination here> and spent a load of members' money". When was the last time the WIA provided members with a detailed, easy to understand report of the achievements and value of this rather expensive Ivy Club membership?

As Mr Kelly noted, the ACMA did indeed confirm that RASA was a peak body. Following what we can only assume were formal complaints from the WIA (WIA Board Minutes November 2019), the ACMA did walk back from assigning the term "peak representative body"; but they backed away from acknowledging **any** association as being a "peak body". We quote the ACMA:

"The ACMA is not affiliated with any amateur representative body, does not confer any formal status on any representative body, and does not regulate the conduct of representative bodies."

https://www.acma.gov.au/sites/default/files/2 020-05/Fact-sheet-Amateur-radio-Regulatory-roles-and-responsibilities.pdf

The WIA met with ACMA to object even further and WIA Board Meeting (November 2019) minutes state:

"Meeting VK2GPK and VK4APM with ACMA (ACMA Rep name redacted) revealed they did not feel this was an issue that required them to backtrack and have refused to act on our requests. ACMA Rep indicated that he considers this a **material distraction**.

It was agreed that we would now write to the chair of the ACMA in relation to this matter.

If there is no action we will follow up with a letter to DOCA

If there is no action we will follow up with a letter to the minister.

Letter to be drafted by secretary and distributed to the board, to be despatched on 2 December "

So, it's clear the ACMA did not "walk back" as claimed by Mr Kelly. This is a classic example of an irrational, unprofessional and petty approach to the regulator resulting in no net benefit for WIA members or Australian amateurs. It's also another example of chronic gaslighting by elements within the WIA. Why is the WIA so obsessed with its erstwhile status as being the only kid on the block?

And it seriously annoyed the ACMA.

Perhaps somewhat alarmingly, Mr Kelly found it necessary to sign his by-line as "Immediate Past President"... now, we don't want to read anything into this, but...

Finally in this well-orchestrated campaign of WIA gaslighting, Geoff Emery closed his "I've been thinking" piece with

"It can be hoped that no supposedly sanctioned breaches are advertised in future. As a service we strive to be correct in our operations and not place our Regulator in an embarrassing position."

Once again, we refer to the email from the ACMA which was clear in its intent.

https://vkradioamateurs.org/wia-and-rasasupport-of-the-ax-prefix/

Maybe what is really required is a little bit of clear thinking....and truth.

The rest of the WIA News Service (25 September) continues on with stories from other regions, peppered with occasional references to upcoming contests.

Of course....one person was missing from the WIA News broadcast...the President..

Now, we don't call out this combative and divisive behaviour by the WIA to be petty.

We call it out for three main reasons:

- 1. It's the truth
- 2. It illustrates how destructive this behaviour is to the WIA and the broader AR community. No-one benefits. The ACMA is placed in the difficult situation of having to consult the entire sector and cannot be seen to be taking sides.
- 3. Improvements to our hobby, both and otherwise, are regulatory negatively impacted. (e.a. improved privileges, improved promotion of hobby. the collaboration across the community, damage due to negative and vilifying behaviour on-line)

Scott Williams VK3KJ demonstrates real leadership, vision, and acceptance that the WIA must adapt if it is to remain relevant in the 21<sup>st</sup> century. It appears his vision is not shared by a majority of his board.

RASA will continue to expose those whose interests do not lie in the future of the WIA or the hobby. These people are more concerned with their own agendas and power bases. They are more focused on denigrating RASA than they are making the WIA a success.

Scott *urgently* needs the support of WIA members if he is to drive a successful change in WIA culture. This message was inferred more than once in his comments at PerthTech.

So, what does this all mean for you, dear reader? If the WIA and RASA had presented a united front to the ACMA over class licencing, we would have had it a year ago. That's a year of licence fees you have had to pay...to effectively feed the egos of a disaffected faction within the WIA.

Instead of engaging with both sector bodies together, the ACMA have had to consult with the entire sector through online survey arrangements....this has served only to delay any improvements...

## Amateur Radio – what counts is your fun, not mine

Late last year I saw this post on Social Media. It's worth publishing here.

"I practice CW with a hand key. I practice telegraphy with Begali or Vibroplex iambic. And when I go contesting, I use the computer to transmit.

But in all these situations, it is always the human ear that comes out. For the key, iambic and computer, it is always the ear working to decipher the morse code.

After forty years as a HamRadio op (I'm 55) I don't see any more space for radicalism. I respect those who do CW, SSB, SSTV, AM, FM, VHF, RTTY, FT8, EME, Sat, HomeMade rigs, Collecting, SWL, etc...

CQWW CW Contest 2021 was a huge party.

I saw colleagues using keys, iambics and computers to send, no restrictions. Because in the end, what counts is your fun, not mine.

So let's not criticize each other.

Let's just indulge ourselves in creative leisure.

Made five contacts? Fifteen? Five hundred? No matter - send the LOG, register for yourself and keep challenging yourself now and forever, in your own way. 73 DX from PY2NY, Jaboticabal SP Brasil."

(Reprinted with permission)



# Tassie Ham Radio Conference and Expo

Tassie Ham Radio Conference & Expo (5th and 6th November 2022)

By the time you read this the Tassie Ham Radio Conference and Expo will be behind us... but what a great initiative and we understand it was a resounding success. We hope to have a write-up in the next edition of QTC.

https://www.reast.asn.au/newsevents/tassie-ham-radio-conference-andexpo/

# My first Morse Code QSO

By Chris VK1CT

On this day (23 June 2022) 21 years ago, I made my first CW contact. This was with Georg VK2DLF. We've had lots of CW contacts since then.

In those early days, I would re-write (so it looked more legible) received text. Thanks Georg for being my first contact and all your encouragement.

73 de VK1CT (formerly VK2MQX)

VKLDLF	23/06/01	1040 - 10502	3-536 1442
HI NAME HE	RE GEORGE	ath ST MARYS	OK K
NICE TO MEE	T 4 RIG K	com 745 A Gub	O OLD RIG
AND UR IN TO UR SIG 599	OONGABBIE I	ts very close	TO ME
THAT'S TERRI	FIC UR SEI	NOING IS VERY	G00D 1M
CAN COPY M	4R FIRST Q Y SENDING	SO IN CW I	HOPE You
U MUST SEA SLOWER NO I	NO QRS OR WORRIES MATE	SCONER I N E HOPE IS OR	ILL SO A BIT
ALL ICOMS R NUMBERS HI.	VERY EASY TO HI CHRIS WI	MIX 40 ALL T HAT TO GO SSB	HOSE FUNNY
OK CHRIS LE	TS GO 558		

Thanks Chris. If readers wish to share any interesting stories of your first QSO (any modes), please send us the details.

## NZ man pleads guilty to breaching Radiocommunications Act

A New Zealand man, who has interim name suppression, recently appeared in Whangārei District Court, pleading guilty to breaching the Radiocommunications Act 1989 by importing prohibited unrestricted two-way radios without a licence. Scheduled for sentencing later this year, he faces a fine of up to NZ\$30,000.

Read more by following this link.

# Amateur Radio celebrates the ABC's 90th anniversary



Australian Amateur Radio enthusiasts are helping to promote and celebrate Aunty's 90<sup>th</sup> birthday both here at home and around the world.

Amateur Radio continues an on-air campaign to celebrate the ABC's 90<sup>th</sup> anniversary with fellow ham radio operators across Australia and around the world.

The ABC and Amateur Radio have a lot in common. Both utilise the magic of radio wave propagation and for the best part of 100 years this magic has informed, entertained, saved lives, and brought people together. Our world is a smaller place thanks to the magic of radio.

Amateur Radio is a hobby like no other. Amateurs (also called "hams") can build their own radio stations, antennas, learn about new technologies and communicate with others all around the world. All without a mobile phone or the internet!

What's so exciting about Amateur Radio? You can learn and apply new skills across a range of technologies and activities. You can enter contests, chase awards, build your own equipment and antennas, operate portable from a mountain top or whilst camping. You can hook up to a computer and use digital modes, send and receive pictures and videos. During 2022 hams from across Australia will be using the special event callsign VK90ABC to contact other hams here at home and around the world. We'll be talking about our national broadcaster, its history and helping Aunty celebrate this magnificent milestone.

Operators around Australia have already logged over 3,100 QSOs across 91 DXCC entities. There have been two very successful interviews by ABC local radio; you can listen to them <u>here</u>.

This special event callsign provides a unique opportunity to promote our hobby far and wide, and we'll be aiming for more ABC interviews in the leadup to the formal anniversary on 1 July 2022.

To learn more about what we're doing or to schedule time using VK90ABC visit www.vk90abc.net

The Radio Amateur Society of Australia provides effective representation for Australian radio amateurs. We promote, support, educate as well as liaising with the government regulator. Globally, there are 3,000,000 hams and Australia has about 13,000 licenced radio amateurs.

For more information, please visit www.vkradioamateurs.org

This initiative has also resulted in at least three interviews with ABC Radio, which has provided a great platform for promoting our hobby.

Bookings for VK90ABC will remain open until December. If you have any queries please send me an email.

73, Chris VK3QB Vk3qb@hotmail.com

# What use is CW to a SOTA operator?

#### By Andrew VK1DA

The increasing popularity of SOTA and Parks operations in Australia and New Zealand has allowed many operators to resume use of the HF and VHF bands, at sites where they are free from the modern curse – noise from switch-mode power supplies, DC inverters and air-conditioning electronics.

But unless you've been paying attention, you may think SOTA operators are dedicated bushwalkers carrying heavy equipment up mountain paths, finally arriving on-site and struggling to make a few contacts on HF SSB or VHF FM. So, what is actually happening on those summits? What modes are they using and how easily do they make contacts? What power and what antennas are being used?

This article will attempt to answer those questions.



#### A brief history of Summits on the Air.

SOTA originated in the UK in 2002 and has been operating in Australia since 2012-2014 when all states were gradually surveyed, summits allocated reference numbers and operators started activating the hills. In ZL the first area to come on line was the North Island (ZL1/ZL2) with 1257 summits in December 2015, with the South Island following soon after with a huge 3934 summits in May 2016. By comparison VK2 has about 1200 summits and VK3 has 701 and VK4 has 1383. VK7 has almost 800... SOTA is very much an internet supported activity program, with websites providing basic information, lists of summits and a spotting service. Also these are supported by several apps for mobile phones both IOS (Apple) and Android (Google). And there are apps for logging, with integrated spotting. More about them later.

SOTA promotes portable operation by portable stations operating within the activation zone at the top 25m of the listed summits. They are using portable power and cannot use a vehicle for power, shelter or antenna support but they can drive to the

top of a summit and then operate at a reasonable distance from their vehicle.

Jargon: the **activator** is the guy (or woman) on the summit. The **chaser** is the operator anywhere else making a contact with the activator. If two activators on separate summits make contact, they are making a **Summit-to-Summit** (S2S) contact. If an activator makes one contact they have **activated** the summit but don't earn the points for the summit until they make 4 contacts and they are said to have **qualified** the summit with 4 contacts.

All legal modes the operator can use are valid for SOTA. HF and VHF bands are all ok, some operators use microwave bands. Hilltops and microwaves are a good combination.



Each summit is allocated a points value between 1 and 10, which the activator earns once a year for each summit, but the chaser earns every UTC day. The points value is allocated on the basis of altitude above sea level.

# What modes are used by SOTA operators in VK/ZL?

The most used mode is HF SSB, followed by VHF FM and HF CW.

In the early years of SOTA in VK, activators would mainly operate on HF ssb with 40m being the most productive band. Some operators would add CW contacts to their activities and when I realised how popular CW was in Europe I made a point of a CW session on every activation. I remember sitting on Mt Ainslie in Canberra working EU stations at sunset in 2013. (And being bitten by mosquitoes on all summits in VK1 around sunset, the worst may have been Mt Stromlo. I soon learned to take insect repellent and wear long sleeved shirts.)

#### What radios are commonly used?

The 817 would probably be the most popular radio. My first activations were made with a Yaesu FT817 at 5 watts.



Seeing how easily contacts could be made at that power level, some activators made a point of using only 2.5 watts and I have completed entire activations at 0.5w output from the 817. The contacts made were mainly on 40m but some on 20m including VK4/5/6 and ZL.

Later I moved to the Icom 703, which was rated at 10 watts output and had an inbuilt ATU. It looks identical to the IC706 series but internally it is very different, with a 455 khz IF and various other differences.

I built up one of the \$9 kits for a Pixie, a crystal controlled transceiver with about half a watt output. I did make the first 4 contacts on several summits using that toy rig.

After that I saw a second hand Elecraft KX3 on vkclassifieds and decided I would buy that for use as my regular HF radio. However, in some situations where I want VHF bands as well, I still use the FT817. The power level does not make much difference to VK and ZL contacts and when you consider it is only 3db different, it is not often that a signal is so weak that 3db less power makes you unreadable. In vk4 in 2021 I used the FT817 for some activations, finding that the JA and W chasers still heard me and I still logged contacts with them. There are many CW-only options, from the Mountain Topper series by KD1JV and sold by LNR, the single band options from QRP Labs, various rigs sold out of China as well as the Japanese and American brands we all know.

A point I have made to new operators trying to choose "the best radio for SOTA" is that whatever they use, it won't be the last radio they buy or build. So don't sweat it, make a decision and get on the air.

# What antennas can you carry that will work on a summit?

My first antenna was a plain simple half wave 40m dipole fed at the centre with RG58 coaxial cable. I added a 20m dipole to it (making it a fan dipole) after realising I wanted 20m capability after my first activation. Later I built a quarter wave vertical with elevated radials for 20m, which worked very well and I had many contacts into Europe using 10w and that vertical.

More recently I have used the ZS6BKW doublet, which works well on most HF bands. For supporting the centre of the antenna most of us use telescopic fibreglass

poles. A common source is Haverfords in Sydney. They even list amateur radio as one of the purposes of their poles, normally used as fishing poles. The heavy duty 7m pole lasts the longest and the top section is strong enough to hang antennas off!

# How do you power a radio for several hours? How much power do they need?

The FT817 has a receiving current of around 400 mA and about 1.5 amps on transmit. With intermittent operation a 2 AH battery powers it happily for about 2 hours. That is quite sufficient for a successful activation using a mixture of ssb and cw.

The IC703 and the KX3 have a receiving current requirement around 200 mA but a higher tx current than the 817. I use a 4.2AH LIFEPO4 battery which will power the KX3 or the IC703 for at least 4 activations of between 1 and 2 hours each. These batteries require balanced charging, ensuring that each cell arrives at the specified 3.6v and none gets all of the charge.

The batteries seem to be good for about 5 years of usage of that kind, being charged after each activation. I have been doing between 40 and 60 activations each year. The 4.2 AH LIFEPO4 battery weighs less than a 2.1 AH sealed lead acid battery (SLAB) so it is very good value in terms of usable life and its weight in your backpack.

I have used an external power amplifier on some activations, mainly where I think a bit of extra power will help make contacts into Europe. Running that at 40w is quite effective. You get the low receive current of the lower power radio but the extra power when you need it on transmit.

# Can you really rely on making 4 CW contacts whenever you activate a SOTA summit?

In 2013 I thought it was very brave to take a CW-only rig to a summit and hope to find 4 chasers. But Warren VK3BYD did that many times and while it sometimes took a few hours, he did make his contacts and was the first in VK to earn a CW-only Mountain Goat award.



In 2018 I earned my first mixed mode Mountain Goat award (by scoring 1000 points for activations) and when I looked through my log I realised there had been too many activations where I had made less than 4 CW contacts. So I decided that all future activations would start on CW and not leave CW until I had at least 4. There have only been a few cases where I could not make the 4 QSOs in the first 30 minutes. Now I find I usually make 5 to 10 CW contacts in the first 30 minutes and then make even more by moving to 20m or 17m where there are often JA and W contacts to be made on CW.

So after another few years my log contained enough activations with at least 4 CW contacts, that I qualified for the Mountain Goat award on CW mode. My average score per activation is around 4, so that means about 250 activations on CW to qualify for the award.

#### QRP Antennas? Is there such a thing?

I see some ads for something called QRP antennas. These seem to be mainly low efficiency designs, with loading coils and thin feedline. They seem to be very inefficient. I never use them. I use full size dipoles or verticals and for greater all band convenience I have been using a ZS6BKW doublet, with is a 28m doublet fed with 11m of 300 ohm ribbon. This antenna works on all bands from 80 to 6 metres and gives great results on 20 and 17m, but does require the ATU in the KX3 or IC703. When using it with the 817, I use the Elecraft T1 tuner and have also used an LDG tuner with similar results.

#### Life is too short for QRP?

Really? I could not make any more contacts if I was running 100 watts. So running only 10 or 15 does not hold me back at all. It is a myth that QRP operators don't make any contacts. Especially on CW where good operators on the other end of the contact will hear much weaker signals than my 10w.

I'm rarely using any more than 15 watts which is the maximum from the KX3. If you find it hard to make contacts with 10w or even 5w, something is wrong!

# New or returning CW operators due to SOTA

SOTA has been the trigger for many operators to rebuild or improve their CW skills. The contacts are not difficult to make provided speeds are appropriate. It is a case of never sending faster than you can copy. If others match your sending speed, you won't have any problem making contacts. The only info you really need to exchange is the signal report, it is guite acceptable for other sources (like SOTAWATCH) to provide me with your summit reference code.



I've noticed a number of operators who had not used CW for many years suddenly turn up calling me on CW when I'm on a summit. In particular when conditions are poor in a sunspot low, CW proves to be invaluable. Some keen SOTA ops in VK are now using CW regularly after virtually never using it before and are very competent.

#### SOTA in New Zealand

SOTA started in ZL in 2015/2016 and there are plenty of keen SOTA activators. Many use CW and you can find them via SOTAWATCH. They are keen to make contacts into VK from their summits just as we are keen to have them call us on ours.

#### SOTA into other countries

CW really comes into its own when making contacts with non-English speaking hams. So many Japanese hams are now on SOTA, as are Koreans, Chinese and Indonesians.

# Phone Apps for viewing/posting to sotawatch, logging of contacts

There are several good apps available to allow you to view sotawatch while on summit, or post a spot notifying a new operating band. The most popular for IOS would be SOTAGoat and in VK, ParksnPeaks app written by Sue VK5AYL combines SOTA and WWFF operations (and other awards) and is able to generate a log file you can transfer by email.

For Android the most popular app is VK Port-a-log written by Peter VK3ZPF. I run it on a Samsung 8 inch tablet for field work and on a Lenovo 7" tablet for logging in the shack. It provides logging, spotting and viewing spots for both SOTA and WWFF parks operations, and recently expanded to cover additional awards POTA and SiOTA.

#### Summary

In this article I've attempted to give you a picture of SOTA as a special interest or

activity that encompasses lots of areas of amateur radio. There are many choices of suitable radios, depending on what your intentions are in regard to the bands you use and whether you want SSB options. You can easily make lightweight dipole and vertical antennas for use on hilltops, fitting into your backpack and attaching to fibreglass poles. You can operate as a slow or fast CW operator and you can specialise in specific bands or be an opportunist like me and work whoever you can hear. I hope I will hear you on the bands either chasing or activating a SOTA summit soon.



#### References

SOTA home page: <u>https://sota.org.uk</u> SOTAWatch alerting and spotting service: <u>https://sotawatch.sota.org.uk</u> SOTA database with all lodged QSOs: <u>https://sotadata.org.uk</u> SOTA reflector: discussion forum <u>https://reflector.sota.org.uk</u> VK1DA's FAQ for amateur radio in Australia – SOTA page <u>https://vkfaq.ampr.org/opersota.php</u> Australian mailing list for SOTA is group OZSOTA at <u>https://groups.io</u>

# The WIA National News – when did it fall from grace?



Sadly, the long-standing formerly and well regarded WIA National News Service has become known as Radio Moscow by many listeners... and listener numbers have dropped off significantly in recent vears.

The WIA News regularly censors, gaslights and misrepresents news. Why would they do this? Who benefits and how is it good for the hobby?

All it does is illustrate a lack of ethics, professionalism, and common decency. It's also a breach of the WIA's own Corporate Ethics Policy.

Example of falsification and/or censorship include:

- 2x1 contest callsigns
- QRM Guru
- VK90ABC Notification & News
- CW Ops Open Contest notification
- VK9CM News

Recently at PerthTech the WIA and RASA Presidents did a joint presentation, with one of their topics being bullying and harassment. Clearly, some of the most senior members of the board, as well as members of the News team do not support the WIA President's vision for the WIA... or the hobby. An interview was recorded and send to the WIA News... who, for some strange reason modified the recording, changing both the content and key messages.

We note the interviewer (Dan VK6NAD) made these public comments about the WIA News.

"I am beyond livid that the WIA, who claim to be the "trusted news" would alter my interview with the two presidents in order to completely change the message.

Attached is the unaltered interview, in which i was careful not to edit anything that was said by either president. Every word they said is present in order.

I considered myself neutral in this interview, the WIA news has in my opinion deliberately altered its meaning. I strongly suggest members in the upcoming election stamp out this behaviour by completely changing the members of the board up for election whilst returning the president who is trying to work for the betterment of the Amateur community."

https://www.youtube.com/watch?v=\_yM\_h\_ RqYEE

We've written to the WIA President asking for an explanation. Or, maybe he didn't know this was happening? It appears there are many inside the WIA who don't support their President, and his vision to bring leadership, ethical management practices and strategic focus back to the WIA.

It also appears that the WIA news service operate to their own agenda.

## **Radials: A pragmatic installation experience**

#### By Chris Chapman VK3QB

Last year we moved QTH, and like any selfrespecting amateur, one of my first jobs was to get an antenna up in the air. I had a DX-Engineering multi-band vertical, and I figured this would be a good all-rounder and provide ready access to a selection of HF bands.

Initially, I attached the antenna to a star picket and ran a few random radials across the grass.

There wasn't too much science or planning in this installation; it was more about having something to plug into the radio to get a bit of on-air time whilst I worked on medium term plans to re-install the Nally tower and consider other options for the lower HF bands.

Once we were settled it was time to improve the efficiency of this antenna. Living in the country and a reasonable distance from neighbours means I have very low QRM and improving the vertical's efficiency made sense.

The obvious choice was to lay more radials. But the practical considerations required research.

I saw three main design challenges:

1. How many radials?

2. What would I use to connect the radials; and,

3. How would I bury the radials?

#### 1. How many radials?

I decided to aim for 32 buried radials, each ten metres in length.; I felt this to be a balance between achieving a reasonable efficiency dividend set against the effort required to cut and bury 32 lengths of wire.

# 2. What would I use to connect the radials?

DX-Engineering offer a very practical solution in the form of a stainless-steel radial base plate. But at USD\$89.99 plus postage I figured this would add up to at least AUD\$200 with postage. A good friend suggested I use stainless steel rulers.... purchased from eBay.

This option required a bench drill; something I'd been wanting for some time. Now I had an excuse.

Well... AUD\$4.92 postage paid, and I had four 30cm stainless-steel rulers. Never mind the \$142 for the bench drill.

# 3. How would I bury and attach the radials?

The thought of using a spade to "slice" 32 ten-metre-long trenches for the radials had me reaching for the Panadol. I recall an amateur mentioning to me some time ago he had used an electric lawn edger for this very purpose.





What a great idea. A Ryobi battery powered lawn edger proved to be the ideal tool for the job. There is a special technique required, but after the first few runs, I developed a method that worked well. I also found that a heavier gauge wire (I ended up using house earthing wire) was much easier to push into the channels. To aid in deferring corrosion, I sealed the ends of each radial wire with liquid tape. Capillary action and corrosion should not be underestimated, especially if you live near salt water.

Even with all this planning, it still took about three weeks of dedicated *radial laying sessions* to cut the channels, lay and then back-fill. Not to mention cutting 32 lengths of wire, soldering lugs, applying liquid tape, and then breaking my back bolting each radial to the base plate rulers in cold Wintery conditions. (this is a job better suited to warmer weather).

Since completing the project, the vertical is now fed with RG-213 coax fed through some heavy duty hose buried about 10cms deep.

From the outset I was interested in measuring the effects of adding radials – if I was going to go to all this effort, it would be nice to measure the efficiency improvements.

Like many amateurs I have a bevy of measurement equipment in the shack. I chose a portable spectrum analyser for the job. If you haven't seen one of these, they really are an incredibly handy tool and can be used for all manner of measurement, analysis, and problem determination.

They're also handy for hunting down QRM.

In this situation the spectrum analyser was used as a Field Strength Meter. The test environment was as follows:

- Measurement frequency: 28.029MHz
- Measurement point from antenna: 70metres
- Tx pwr: 5W CW

Seventy metres placed me outside the near field, but close enough that any changes to the angle of radiation should not impact my measurements.

Of course, there is a lot that hasn't been considered in my somewhat rough and unscientific measurement method... but as a relative measure of improvement this illustrates the value of adding radials to a vertical antenna.



Bottom line... Going from 4 radials (-52 dBm) to 32 radials (-46 dBm) improved the field strength measurement by 5-6dBm.

On transmit, 6dB is the same as an amplifier from 100W to 400W. And of course, whilst I didn't take any measurements, it's probably fair to assume my SNR on receive will have benefited from 32 radials.

The whole radial project cost less than \$100 and has provided my station with a very effective all-round vertical antenna for seven HF bands. It's handy as a broadband propagation checker, works very well for broadcast station reception, SWL from 4-15MHz and gives me a nice all-rounder for my WSPR transmitter.

In researching this project, the following rules of thumb were noted:

- Buried radials are detuned: you don't need to worry about trimming them to resonance;
- As a general rule, ground radials should be at least 1/8 of a wavelength in length;
- For an 80m vertical, it is better to install 20 \* ten-metre-long radials than ten \* 20 metre-long radials;

• Broadcast stations generally have 120 radials: a practical amateur radio installation will get by with 12-16 radials. If you are especially keen you can go up to 25-30 radials; and,

• Adding more radials may not greatly improve efficiency, but it will provide redundancy where radials may suffer corrosion, continuity issues or complete failures due to external events (like a shovel or some other catastrophic event).

The law of diminishing returns applies to radials. Conventual wisdom suggests between 16 and 32 radials for most amateur radio applications is adequate. Some extremely dedicated top-band enthusiast will install 60+ radials. Even these mad-keen top-banders will more than likely confess to obsessive compulsive radial disorder!

Now the multi-band vertical system – and I call it a system - is fully deployed I can move on to completing my Nally tower installation and K9AY receiving loop.

If you're intending to install a vertical antenna, you're very first thoughts should centre on the radial system. You'll get a vastly superior result, and you'll also avoid causing QRM.



# Is your shack complete?

Build this LED Clock that silently tells the time in Morse Code.

## Never be late for dinner again!

Only available in kit form, it's a fun way to introduce the art of surface mount soldering.

When visitors out-stay their welcome, point to it and say "Shouldn't you be heading home soon?"

The time is attractively displayed in **HoursMinutes** and **Seconds**. (10:26:30 **shown**). It can be mounted vertically or horizontally, as preferred.

Assembled from a mix of Through Hole and Surface Mount components, this clock is crystal locked, battery backed and 12/24 hour time selectable, so its UTC ready. Size is 160 x 190mm, with an enclosure fabricated from screen-printed pcb material. It is powered by a 9 to 12V plug pack, or 5V USB connection. A photocell makes it auto-dim at night, so it's great next to the bed. Low QRM design!

Assembly time is approximately 2-3 hours.

Prove to your family that Morse Code is alive and well and that your time in the shack is never wasted. The perfect gift idea. Or dare to take that final step and remove all the regular clocks from around the house.

View this **YouTube** link to see the construction steps: <u>https://www.youtube.com/watch?v=BvNIWvE5BsE</u>

The kit is \$156.00 including postage & gst. Visit the website for more information: <u>http://www.alianelectronics.com.au/sm456-morse-code-clock-kit.html</u>

(Paid advertisement)

# Low Band Operations at VK9NT, April 2022

#### By Luke VK3HJ

VK9NT set up again at Pacific Palms, on the north-west of Norfolk Island. This has been the site of numerous DXpeditions over the years, including VK9NT five times and VI9NI in 2019. The site has plenty of room for antennas, many tall Norfolk Island pine trees, underground power, and no near neighbours.

The team arrived on Norfolk Island on Thursday afternoon 14<sup>th</sup> April. Unfortunately, the baggage of Chris VK3QB and Luke VK3HJ had not been loaded on the plane leaving Melbourne, leaving the team without amplifiers, but with some QRP rigs (intended to be operated with amplifiers). The baggage of Alan VK6CQ did arrive, with an IC-7000 and some antennas, so that was set up to run FT8. Some CW QSO were made with QRP using an IC-705 and a mobile whip!



Luke VK3HJ on the paddle atVK9NT

On Tuesday 19<sup>th</sup>, the baggage with amplifiers and other equipment arrived on the island, so more antennas were set up. On 160 m, an Inverted-L antenna was set up using a Norfolk Island pine tree as the support for the wire. 30 m of wire sloped up to high in the tree, about 25 m high, with 7 m remaining, tied off to the back fence. 27 ground radials of about 20 m completed this antenna, and it was fed directly, matching nicely.

On 80 m, a doublet antenna was suspended between the same tree supporting the 160 m antenna and another big tree. This antenna was at least 20 m high, and worked very nicely on all bands up to 10 m. It had 20 m of wire each side of the feed point and 450 ohm open wire feeder, to a balanced coupler. To help receiving of 160 and 80 m bands, two Beverage antennas were set up, each around 100 m long, one to the northeast and the other to the north-west.



160m Inverted L

Conditions were just OK on 160 m, with only about 5 full nights of operation, but many QSO were made into North America and East Asia, and a few dozen to Europe. It was a bit late in the season for Europe. In total, 280 QSO were logged on 160 m.

On 80 m, conditions were a bit better, with a total of 341 QSO, again mostly North America and East Asia, and some into Europe.

The CW station used an IC-705 driving an SPE 1.5kFA or 1.3kFA amplifier. The SPE amplifiers allowed us to easily switch antennas for receiving on the Beverage or the transmitting antenna. Band Pass filters were used on both stations to minimize interference.



Sunrise at VK9NT

VK9NT is planned again closer to the March equinox next year. Busy holiday periods will be avoided next time, and hopefully we can operate with full capacity from day One!

## How has RASA performed since 2018

RASA recently held its fourth AGM. The organisation now has a solid basis on which to demonstrate its performance and compare itself to the 112-year-old incumbent, the WIA.

The Radio Amateur Society of Australia (RASA) is national organisation а established in 2018. It's no secret that RASA was formed out of widespread concern that the WIA was performing poorly as the sole nationally representative body of Amateur Radio in Australia. Financial losses were significant. and four treasurers resigned in two years citing financial and Director's *duty* of care concerns. There were serious concerns over the manner in which the Deed with the ACMA was being managed.

These are the facts.

RASA has not sought to replace the WIA but rather has offered an alternative voice for the Amateur Radio community. It has always been RASA policy not to attack the WIA as an organisation, but we have reserved the right to dispel falsehoods circulated to the sector and to question poor performance by the incumbent. This is normal professional conduct. RASA is not "at war" with the WIA. We have always had an open door for discussion and have reached out to the WIA Board on many occasions seeking cooperation and consensus for sector wide issues. This is still the case.

The ACMA, AMC, ASIC, many radio clubs and thousands of Australian Amateurs recognise RASA as an active National Representative Body. Still, a majority of the WIA board refuse to accept RASA, refuse to communicate with RASA, and have gone to significant lengths to discredit our position as a representative body to the ACMA. This belligerent approach achieves nothing for the WIA or the hobby.

All this is on the public record. It is not speculation. In many ways it doesn't matter to the thousands of amateurs who simply want to get on enjoying the hobby of Amateur Radio. What *does* matter are results.



What has RASA really achieved to promote and support the hobby and how does it stack up against the long serving WIA? Where comparisons are made, they should be derived from facts and verifiable observations. To paraphrase Monty Python, "What have the Romans ever done for us?" The question has relevance.

We investigated.

#### Let's start by making a basic comparison of cost and service.

Description	RASA	WIA
Annual membership fee	\$10 for	\$95 for every year
	first year, then free	
Magazine	4 per year	6 per year
	Free to all Amateurs	Members only
QSL Bureau	×	For WIA members
		only
Website	~	~
Interference Management Resources	<ul> <li>Image: A second s</li></ul>	×
	Free to all Amateurs	
Interference Management helpdesk	<b>v</b>	×
	Free to all Amateurs	
Foundation Licence Manual	Thee to all Amateurs	
	×	✓
		Must be purchased
Welcome to Amateur Radio handbook		
	<ul> <li>Image: A set of the set of the</li></ul>	×
	Free to all Amateurs	
VK Regulations handbook	1	
	✓	<b>X</b>
	Free to all Amateurs	
Information Packs for new amateurs		
	×	
	Distributed via clubs	
Active Contest program	1	1
	×	×
Club public liability insurance scheme	×	~
Representation on sector matters to ACMA		
	✓	$\checkmark$
IARU Membership		1
		<ul> <li></li> </ul>
Regular presence at Hamfests	1	
	×	
Regular attendance at local clubs to present and hear feedback	<ul> <li>✓</li> </ul>	

#### Visits to radio clubs – in person.

Since 2018 RASA has been invited to present at many radio clubs around the country. These provide a real two-way interaction between members and RASA. A lot of work goes into these road trips, but they all have had positive outcomes. RASA were at PerthTech this year, as well as the Southern Tasmania Conference in November.



We looked hard, but there were very few occasions where the WIA have attended any clubs.

#### Visits to clubs – via Zoom

During lockdowns, clubs could not open their rooms or receive visitors, but they worked hard to keep in contact with members. RASA was there too, providing Zoom presentations to clubs when that was the only way to connect. RASA even presented to three clubs in the USA. Now that things are returning to normal, we expect more visits in person.



#### **Membership Trends**

These two charts largely speak for themselves. Each year since inception, RASA has continued to grow its membership base. The WIA have had many years to attract and grow their membership base. However, Amateurs look for value and tend to vote with their feet.



**RASA Membership Numbers** 



WIA Membership Numbers

#### **Membership Fees**

This is definitely a metric where the WIA is well in front of RASA. RASA has always

taken advantage of the internet and modern business practices. Some RASA detractors refer to us as "The Online Radio Club" or "OLRC"... we see this as a badge of honour.

We operate a modern efficient organisation for not only our members, but for the broader amateur radio community. And we don't use membership funds to prop up an inefficient and out-date business model.

Like the WIA, our members are distributed across all states and territories and never meet in one place. We recognise that real estate is an unnecessary and expensive overhead.

What this graph doesn't show, is that after the first year, RASA membership is free. RASA relies upon the generosity of its members and supporters to make contributions where they see value in the work performed. It is uncanny the number of RASA members who choose to donate \$95.



Like most things in life, there is the price and there is the value. It is up to the individual to work out where they see the value.

#### Liaison with the ACMA

We are not going to even try to plot this data as both organisations have met with the ACMA many times. What is important is the professionalism quality and of the interactions with the regulator. We have been told by the ACMA that they would much prefer to meet jointly with the two representative bodies, with а unified consensus on important issues. RASA also supports this position. Unfortunately, the WIA seat is usually empty during these meetings. It shouldn't be.

In 2021 RASA successfully negotiated the introduction on 2x1 Contest Callsigns. These tangible outcomes show that RASA

maintains a professional working relationship with the regulator.

#### **Magazines**

Both RASA and the WIA have been publishing a magazine dedicated to the hobby of Amateur Radio. How educational, entertaining or appropriate these publications are is highly subjective.

RASA's QTC magazine does not seek to be a scientific journal but rather attempts to strike a balance between technology and relevant Amateur Radio news - without frightening away newcomers.

A significant point of difference is that the WIA AR magazine is only distributed to WIA (and occasionally members. via newsagents, for \$14.50). RASA's magazine, QTC, is free - for everyone. As it is a digital magazine, the QTC news is always fresh. The cut-off for important articles is only a couple of days before publication. RASA magazines now have a good international following. We have been advised that many countries rely on QTC to find out what's really happening in VK.

#### **Reverse Beacon Network**

An international beacon network has been established around the world called the RBN (Reverse Beacon) Network. This works by monitoring DX stations electronically by callsigns and integrates live signal path comparisons on a website. It is an important initiative that was under-represented in Australia.

In 2020 RASA established a Reverse Beacon in West Gippsland, Victoria, which now fills in an important gap in the global network.

#### Free Welcome Packs for New Amateurs

This initiative has only been operating for about a year - clubs running courses for new amateurs look for key materials to soften the steep learning curve. RASA launched a campaign to send free 'Welcome Packs' to clubs that request them for their students.

About 70 pages of content and a laminated band plan helps new amateurs to get started. 65 have been sent so far.



There is no requirement for recipients or clubs to be RASA members. These are available for all new and prospective Amateurs.

#### **Reducing interference for Amateur Radio**

The WIA are not active in this important facet of the hobby. There are no WIA initiatives to help Amateurs resolve technical issues around interference – yet today, the vast majority amateurs report to us that they are affected by man-made electrical noise (QRM).



Click the image to visit qrm guru

In 2019 RASA launched the QRM Guru website to take amateurs through a logical process of resolving interference issues. This is done through articles, videos and documented experiences. This has become a resource to help Amateurs around the world. Some articles have been translated into many languages.

QRM Guru has indirectly assisted the ACMA; where interference complaints have been lodged by Amateurs in recent years, thev are more concise and better documented than in the past. QRM Guru is presented as a stand-alone site. for everyone, not as a RASA site. Yet as a side-note. QRM when Guru authors attempted to submit a paid QRM mitigation advert in the WIA's AR magazine, it was rejected outright by the WIA board - even before any content had been provided. Unfortunately, the WIA has become extremely discriminatory (the WIA have an active censorship policy) about the news and information they deliver to the Amateur Radio sector.

(The WIA have been invited to participate in QRM Guru but have ignored or rejected any advances from the QRM Guru team).

#### Merchandise

The WIA publish and sell the Foundation License Manual. RASA provides a number of reference books for free.

RASA imports a range of ferrite rings and snap-ons and sells them as kits to assist amateurs in reducing interference. Over 2,500 ferrite rings and snap-ons have been sold to Australian Amateurs since 2019 through this program. Profits go towards the cost of website and Welcome Packs for new amateurs.

#### **Marketing & Promotion**

There isn't much WIA activity to report on here. The WIA web-site offers out-dated media packs, but these are not widely advertised or used.

RASA accesses the public media to promote Amateur Radio during special events, such as VK90ABC. In the last six months there have been at least five interviews with ABC Radio as a result of these initiatives.

#### Summary

RASA and the WIA are effectively delivering very similar services. It is not very difficult to

make direct comparisons between the two organisations. The gross expenditure for RASA for the past year was just \$7,776 while gross expenditure for the WIA was listed as \$299,000.

Another point of difference worthy of note is our respective operating models. RASA operates under a policy of **inclusivity**, which means that the work we do is for **everyone** and the resources provided make no distinction between members and nonmembers. People join RASA and make donations because they want to, not because the organisation demands it of them.

By contrast, the WIA operation is based on **exclusivity**, which means that very few resources are available to non-members. Magazines, QSL bureaux, Award Programs, and club insurance concessions are only available to members.

Administration overhead is another important metric and illustrates how efficiently services and resources are being delivered. This has become an important consideration in the charitable and hobbybased sectors. What proportion of revenue goes directly towards the betterment of Amateur Radio? What proportion is used on administration and overheads. When a membership fee or donation is made to a Nationally Representative Body, how much of the contribution is lost in accountant's fees, property maintenance, staff, and administration costs?

Why does the WIA continue to pay accountants (over \$220,000 over five years) to perform a function that volunteer Treasurers previously provided for **free**? This question has never been answered properly by the board.

The RASA management team has been working hard since 2018 and is proud of our achievements to date. However, the real judge is the amateur radio community. Are *you* getting value? What more would you like to see happen?

Tell us what you think. As always, we are listening.

# Hotspots for Digital Voice Modes DMR | Fusion | D-Star | P25





# **Custom Built In Qld by VK4NGA** To View The Entire Range: Click This Advert

VK4NGA Digital Amateur Radio | Glenn Allemand Email: techboy@gypsymail.id.au YouTube VK4NGA

#### **Bullying and Harassment in Amateur Radio**

(The Presidents of RASA and the WIA have contributed to this article, and you can skip to the end to read their joint statement. Or, preferably, read the whole article and help stamp out this anti-social behaviour.)

It is regrettable that we need to pen an article covering this topic. But it is well beyond time to expose and address the nastiness and toxicity that has entered a small but loud sub-section of the amateur radio community.

And it's not doing any good for the hobby, or for the victims, who often suffer in silence.

Sadly, bullying is not new to Amateur Radio. But what is new and has amplified the issue, is social media and various online platforms. And this is where the toxicity and vitriol has accelerated in the last few years.



Some churlish and toxic political influences aren't helping. Our two national bodies (the WIA and RASA) must find a way to break the impasse and work towards collaboration and cooperation. Both Presidents want to see this happen.

As with broader community expectations, bullying and harassment are matters that are receiving attention from authorities, community groups and individuals. We see campaigns in the media and focus from support groups.

At the far end of the scale, we have the RUOK campaign, dealing with suicide and the very real threat to personal welfare. There are also campaigns for the workplace as well as for our kids.

https://www.ruok.org.au/

https://www.fairwork.gov.au/employment-conditions/bullying-sexual-harassment-anddiscrimination-at-work/bullying-in-the-workplace https://kidshelpline.com.au/teens/issues/bullying\

As far as our hobby is concerned, we have the following policies from our two national institutions:

The Radio Amateur Society of Australia offers a clear policy: https://vkradioamateurs.org/rasa-harassment-and-bullying-policy/

The Wireless Institute of Australia has a Corporate Ethics Policy: https://www.wia.org.au/joinwia/wia/about/documents/WIA%20Corporate%20Ethics%20Policy%2 0As%20Adopted.pdf

RASA and the WIA President oppose all forms of harassment, discrimination, and bullying. This includes treating or proposing to treat someone less favourably because of a particular characteristic; imposing or intending to impose an unreasonable requirement, condition or practice which has an unequal or disproportionate effect on people with a particular characteristic; or any behaviour that is offensive, abusive, belittling, intimidating, or threatening – whether this is face-to-face, indirectly or via communication technologies such as mobile phones and computers.

So, what does bullying look like? Bullying behaviour might include:

- abusive texts and emails
- hurtful messages, images, or videos
- imitating others
- excluding others
- humiliating others
- spreading nasty gossip and chat
- creating fake accounts to trick someone or humiliate them
- threatening emails, social media posts or texts
- intimidating or aggressive behaviour on an ongoing basis
- statements that are defamatory

Bullying is when someone, or a group of people (this may include organisations or Government Departments), who have more power at the time, deliberately upset or hurt another person, their property, reputation, or social acceptance on more than one occasion. It may involve discrimination, exclusion, or denial of access to resources or services.

In one example, Onno VK6FLAB notes in his recent podcast:

"that I'm distressed to report that yet another amateur has been bullied out of our community. An amateur who joyfully participated in this community, who made videos, wrote software, learnt and shared. Like others I know, she was bullied in our community because she was different and it's not the first time I've witnessed this behaviour and it's not the first time I've called out this unacceptable conduct by so-called members of our community. Different, how you ask? Does it really matter, or are you asking to determine if there was a valid reason for making her feel uncomfortable?"

http://podcasts.itmaze.com.au/foundations/20220724.foundations-of-amateurradio.txt?fbclid=IwAR0H\_SbX0t7K3ED\_mT9oS3tJ\_ZIFU2SIEOg2mwBjvXzpeEAeF1Of2qcbEz0

Is this really what we want our hobby to represent?

#### What Bullying is Not

Many distressing behaviours are not examples of bullying even though they are unpleasant and may require intervention. There are three socially unpleasant situations that are often confused with bullying:

**Mutual Conflict**: In mutual conflict situations, there is an argument or disagreement between people but not an imbalance of power. Both parties are upset and usually both want a resolution to the problem. However, unresolved mutual conflict sometimes develops into a bullying situation with one person becoming targeted repeatedly for 'retaliation' in a one-sided way.

**Social Rejection or Dislike**: Unless the social rejection is directed towards someone specific and involves deliberate and repeated attempts to cause distress, exclude or create dislike by others, it is not bullying.

Single episode or acts of nastiness or meanness, or random acts of aggression or intimidation: Single episodes of nastiness or physical aggression are not the same as bullying. If a person is verbally abused or pushed on one occasion they are not being bullied. Nastiness or physical aggression that is directed towards many different people is not the same as bullying.

#### What do you do if you are being bullied or harassed?

• Keep a record of the bullying or harassment. This may include a written journal, copies of emails or screen shots of social media posts.

• Tell the person to stop. Provide them with examples of the bullying if you feel comfortable doing so.

• If the bullying continues and is occurring within a club or association, bring the matter to the attention of the relevant board or committee

• If you believe the bullying or harassment is serious enough that you are concerned for your personal welfare or property, you should contact the police.

Discrimination, bullying and sexual harassment are unacceptable and are unlawful under the following legislation:

- Sex Discrimination Act 1984 (Cth)
- Racial Discrimination Act 1975 (Cth)
- Disability Discrimination Act 1992 (Cth)
- Age Discrimination Act 2004 (Cth)
- Australian Human Rights Commission Act 1986 (Cth).

Where do we go next?

As one correspondent suggests:

"The Standard You Walk Past Is The Standard You Accept. It's not just up to victims of bullying and harassment in a community to speak out. As members of our community, we amateurs have a responsibility to speak out also. Anyone who doesn't is part of the problem. Our community is so diverse as to never be one single thing. A bully is a bully, no matter which words are used to sugar coat it."

We can all contribute to the solution. If you witness bullying, call out the bully. Tell them to stop. Offer support to the victim.

If you feel the behaviour is organisational, or tacitly endorsed by a group, club, or association, contact the committee or board of the group. Hopefully they have a code-of-conduct and can take formal action against the perpetrators.

You can also reach out to the Presidents of RASA or the WIA. We know this is a topic close to both Presidents. In fact, WIA President Scott Williams has been subjected to abusive and threatening emails and telephone calls; just because he is taking a stance against this very topic in working with the RASA President.

Let's stop ignoring this small but nasty element in our hobby and work collectively to stamp it out.

In preparing this article we sought comment from the WIA and RASA Presidents.

Both the Presidents of the WIA and RASA support the imperative to stamp out bulling:

As the Presidents of the WIA and RASA, it saddens us to read some of the inappropriate comments and posts that appear across various social media forums that are dedicated to Amateur Radio in Australia.

We have all witnessed a deterioration in social media posts over the past few years on various VK social media sites, that in some cases have seen individuals berated and humiliated for sometimes just asking the simplest of questions.

Also, some have been targeting other operators about their operating techniques. In some cases, listing their callsign and name in an attempt to embarrass or humiliate them in the public domain.

And then we have some who choose to demonise individuals who are pro-RASA, pro-WIA, anti-WIA, anti-RASA or simply want to ask questions. It seems we have lost the ability to celebrate what we share in common, and work through our differences in a mature and considerate manner.

It is our joint view that we all have a shared responsibility to stamp out this unnecessary and antisocial behaviour and to extend the respect and decency to all those using social media platforms.

Amateur Radio is such a wonderful hobby. Let's hope social media platforms don't become even greater echo chambers for those wanting to share indifferences and bully others.

Let's work together to STOP antisocial behaviour on air and on-line.

Extending respect and courtesy to all is so important.

Scott Williams VK3KJ - WIA President, Paul Anslow VK2APA – RASA President

If your club would like help drafting a Bullying & Harassment Policy please contact us. We have a collective responsibility to stamp it out and support the victims.

# **Beautifully Simple** Remote so easy it's practically magic

Flex-6400 from \$3,550 Flex-6600 from \$7,075 Flex-6700 from \$12,400



Buy a FlexRadio and get started with SmartLink™ today

SmartSDR for iOS now available for iPad on the App Store

futuresystems.com.au | sales@futu

sales@futuresystems.com.au

08 6336 9610

Prices as of July 2020, prices are subject to change without notice

### Local News & Info

#### World Map for your shack

Here is a great free program you can use in the your shack. Simon's World Map. Check it out at:

https://www.dit-dit-dit.com/world-map



### **Amateur Radio News**

For the most informative Amateur Radio news, on-air, online and Podcast. Click the image below for more info.



#### Support

We remember how hard it is when first starting out in Amateur Radio.

Amateur Radio Tech Support is an online Knowledge Base with a ticketing support portal. It is aimed at newcomers and provides a selection of Knowledge Base articles to help as you get started in the hobby. For more information, click on the logo.

If you have QRM issues we recommend you visit <u>QRM.GURU</u> and following the process found at the <u>Start Here</u> menu.

## COCOS KEELING ISLAND – VK9CM

Four VK ops, Alan VK6CQ, Luke VK3HJ, Zeljko VK6VY and Chris VK3QB activated Cocos Keeling Island from 25 Oct to 4 Nov.

They operated from 40m through 10m using CW, FT8 and SSB. Antennas were all verticals.

There will be a complete write-up in the next edition of QTC.



Product catalogue with any online or in-store purchase. Your guide to our entire range of parts.

# **ALTRONICS** Build It Yourself Electronics Centre®

Established 1976.

# Your local electronics shop.

supplies » Connectors » Cabling » Parts & much more! Come & experience our great friendly service.



### Browse all 10,000+ products online 24/7 @ altronics.com.au

#### Western Australia

» Joondalup: 2/182 Winton Rd	08 9428 2166
» Perth: 174 Roe St	06 9428 2188
» Balcatta: 7/58 Eriodale Bd	08 9428 2167

- » Cannington: 5/1326 Albany Hwy 08 9428 2168
- » Midland: 1/212 Gt Eastern Hwy 06 9428 2169
- » Myaree: 5A/ 116 N Lake Rd 08 9428 2170

Victoria	
» Springvale: 891 Princes Hwy	03 9549 2188
» Airport West: 5 Dromana Ave	03 9549 2121
New South Wales	
» Auburn: 15 Short St	02 8748 5388

07 3441 2810
08 8164 3466

Products also available through our regional reseller network & Leading Edge electronics stores.



# Resolving interference for Amateur Radio

### QRM Guru

#### By QRM Guru team

In the next step to support amateurs both here in Australia, as well as abroad, the QRM Guru team have implemented an online ticketing system dedicated to QRM. This will enable us to track any requests for assistance in a more orderly fashion, leverage off similar cases and collect statistics on the types of QRM that plague amateurs the most.

It is our vision that QRM Guru will provide online and on-the-ground support via a network on volunteers and clubs across Australia.

Also, collecting statistics will enable us to identify if there are particular process steps that require better communication or training, as well as highlighting where amateurs face the greatest technical challenges.

So, if you or someone you know is having trouble resolving a QRM issue please visit QRM Guru in the first instance, follow the process, profile the noise and then open a ticket.

Depending on complexity and location, our support will extend from basic email exchanges, through to telephone or Zoom calls and (if resources permit) an on-site visit.

To facilitate this vision, we are calling on any clubs or individuals who may be willing to assist us in responding to calls for help.

#### Misunderstanding

Recently the ACMA issued a broadcast bulletin advising they did not endorse QRM Guru or any related products or services in the Amateur Radio sector.

The team wrote to ACMA to clarify this matter. ACMA responded by raising concerns over the term "endorse" and that this may infer the regulator had a legal or commercial interest in the resource. They were also concerned it may infer that they were in some way directly affiliated with QRM Guru and/or had contributed to its development.

All of us here at QRM Guru and RASA apologise if there was any misunderstanding over the use of this term. It was certainly not our intention to infer anything other than a broad-based support for the benefits the resource brings to the Amateur Radio community.

We continue to seek feedback from amateurs everywhere, as well ACMA staff on how QRM Guru can assist the sector and the regulator in reducing interference on our Bands.

As always, you can search QRM Guru for hints and tips on how to hunt down local noise, what tools to use and refer to useful case studies from real world situations.

# QTC November 2022 Rote learning

Amateur radio is a technical hobby. Amateurs recognise that we need to keep up with the times and acknowledge that social expectations have changed.

Learning about valves, analogue TV and complex transmission line theory is far less relevant to the modern-day radio amateur. Our syllabus needed to change, and the recent move by ACMA to adopt the European CEPT syllabus is very good news.

Ours is a hobby of technical investigation, self-improvement, participation, and continual learning.

Our hobby is also merit based... the more you put in the more you get out. This not only applies to our privileges model but also to broader participation in the hobby.

And of course, the bulk of learning and selfimprovement will happen long after you pass the exam and obtain your callsign. However, Amateurs tell us that we must maintain a basic level of competence for those entering the hobby.

In recent years we've seen a relaxation in the standards expected to obtain a callsign and enter the hobby. And, for the most part, this has been a good thing.

However, it is not uncommon to see questions on social media that expose a fundamental failure of our education and examination systems. We see questions such as:

"I have a Yaecomwood radio. Will ATU model xyz work with it?"

"My HF radio requires a DC supply voltage of 13.8V +/- 15%. Can I hook it up to a 12V car battery?"

Now, it is not our intention to embarrass or criticise the individuals asking these questions... but we are challenging the system that fails them in their education and examination testing processes.

We see US advertisements for courses that offer quotes such as:

"This is NOT a ham radio training course. You will not be learning how to operate a ham radio when you complete our course."

These "courses" result in amateurs that do not understand the fundamental theory underpinning the hobby. This often means "dirty" signals on-air, RF feedback to the shack and local QRM in the house.

These failings also mean that some new amateurs lack the basic skills to investigate problems, research solutions and ask the right questions. It also means many amateurs don't know how to offer critical signal reports.

And this is why so many amateurs are against rote learning and question banks being published online.

We note that AMC, backed by a sandstone Australian University has also called out this issue:

The AMC AR Office is aware organisations have online revision questions for use when preparing for Foundation amateur radio examinations. It should be noted that these revision questions are not in any way endorsed by the AMC AR Office.

It is reasonable to assume that the AMC comment is directed at the WIA, who continue to publish a FL question bank on their website.

We have discussed this issue with the WIA President numerous times, and yet he refuses to remove the questions. Why?

Rote learning:

"Doesn't allow for a deeper understanding of a subject. Doesn't encourage the use of social skills. No connection between new and previous knowledge. May result in wrong impression or understanding a concept."

Ref: Oxford learning

Publishing question banks and quick on-line courses which teach students to answer questions are not the answer to growing our hobby.

Dodgy pathways via foreign licence systems aren't working either.

Let's work together to raise the standards and encourage newcomers to undertake effective training with local clubs, Ham College (in Perth) and the Radio & Electronics School.

## **Exams and Callsign Administration**



providing exams and callsign administration services on behalf of the ACMA.

For more information, visit the <u>AMC Website</u> and follow the links.

#### RASA's YouTube Channel

Did you know RASA have our own YouTube Channel? Click the YouTube logo below to visit our channel.





### Training Courses

Looking to get your licence or upgrade? If

you are in Perth, contact Ham College for excellence in face-to-face training. Click the image for more info.



 National Online and Remote Training from the Radio & Electronics School. Since
 1997. Click the image

for more info.

#### **Club Visits**

Even through the Covid lockdowns of the past two years, RASA has been offering Zoom presentations and we are back to face-to-face meetings in 2022.

We can talk about what we've been up to, and perhaps more importantly, hear your views and answer your questions.

RASA is the only national body that visits clubs regularly (in-person or by Zoom).

Email us info@vkradioamateurs.org

## Welcome Packs: Free resources for Clubs

#### Does your club run training courses or exams for newcomers? If so, read on...

RASA has put together a free *Amateur Radio Welcome Pack*. These packs comprise a portfolio folder which includes a number of useful documents and reference sheets.

Give your students some practical and relevant material to take away at the end of the course.

Included in this *Welcome Pack* are some documents and information sheets to help your students get started.



- Welcome to Amateur Radio Guide Book
- VK Regulations Handbook
- Getting started with Repeaters
- Australian Band Plan Quick Reference Guide
- Interference Resolution (QRM) Process
   Guide
- Useful Web sites information sheet

If your club is running a course and would like to provide these resources to your students just send us an email. The is a free resource. We only ask that you cover postage costs.

Have your Club President email us at info@vkradioamateurs.org

## **National Special Interest Groups**

Links to VK national groups with a brief explanation of their activites. Click on the image to visit their web site.





# Parks n Peaks – all about operating portable

VK Spon. VK Alerts History WWIF Cluster WWIF KUANNA SANNCDA VK Shires QRP Parks Panks Shires Maps Tools Help

#### VK Contest Club- VK Contesting

VK Contest Club Acout W contents Tools Tactics Membership Contact Q



#### QRM Guru- resolving interference



Resolving interference for Amateur Radio

VK DMR Network – Australia's largest digital radio network



#### D-Star - Digital Radio



**RAOTC**– for amateurs licenced 25 years or more



#### ALARA – Ladies Amateur Radio Association



If you see we've overlooked something, please send us an email <u>info@vkradioamateurs.org</u> please send us an email <u>editor@gtcmag.com</u>

## **VK Suppliers of AR Products**





Neither RASA nor QTC Mag endorse or have any affiliation with suppliers on this list.