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I worked as a "Radio Inspector" in various roles for (respectively) P&T, DOTC and SMA, between 1978 and 1996, in the days when regulatory staff were employed. Today's lack of such staff seems to be the main reason for the push to move amateurs into Class Licence status, much like occurred with the CBRS. That move did little to the income stream while it substantially reduced the costs to the Government and that de-regulation resulted in chaos. I have held an Australian Amateur Licence since April 1967 so have "seen a lot", not all favourable.

The push to do the same with the amateur service could result in chaos despite, overall, most amateur operators abiding with The LCD. What it does do is create opportunities for 'others' who are not holders of a qualification certificate, just appearing on amateur frequencies as if valid users. And we are unable to do anything about it, mainly because the ACMA has become a 'toothless tiger', having generated rules but nothing to ensure that these rules are obeyed.

I have major reservations about the whole devolvement of the existing Apparatus Licence to Class Licence concept and process. At present, amateurs are afforded an interference/protection status under the LCD and we pay an annual licence fee, which includes a tax component. Our licences are recognised overseas, just one of many recognisable features. After the transfer to Class Licence, any protections are degraded or removed and, theoretically, no licence fees will be payable. There will no longer be "licences" as such, and overseas recognition will be made more difficult.

What has not been made apparent is the fees and charges that the callsign management body (currently named as the AMC) will levy on holders of Australian callsigns. In lieu of the current \$55 annual licence fee, the AMC will have unlimited options to charge anything they wish to, without controls, and there have not been any details promulgated as to what that they might be. And, that status also refers to existing callsigns, not just new applications.

This whole issue is complicated as there is no true transparency as to what the AMC might do, can do, and will do, without an overlying set of public policies being implemented. There has not been any documentation provided by the AMC (to my knowledge) to explain what the new guidelines, processes and implementation will be – yet we are asked to provide our thoughts on the transition from ACMA to AMC when we are only partially aware of the actual direction and processes. That simply is not good enough.

It could well be that we are better served under the Apparatus Licence regime despite the costs and difficulty to the ACMA in managing the service, and their wish to devolve the service.

Let me preface my comments further with a re-iteration from my last submission (IFC 01-2021), the "Australian Maritime College" should not be named in a piece of Commonwealth Legislation yet it still appears as follows :

“4 Definitions

- (1) In this instrument:

Act means the *Radiocommunications Act 1992*.

AMC means the Australian Maritime College, an institute of the University of Tasmania.

“

The term AMC appears again as “***call sign*** means a sequence of letters and numbers assigned to a person by the AMC as a call sign.

“

I refer you back to my submission under IFC 01- 2021 which stated my objection to this appearing in the Class Licence Legislation :

“In Section 4 of the proposed Class Licence document under Definitions is the statement : “ ***call sign*** means a sequence of letters and numbers assigned to a person by the AMC as a call sign.” where “***AMC*** means the Australian Maritime College, an institute of the University of Tasmania.” **I strongly object that the AMC is named in proposed legislation** where instead it should be more like “a body, or bodies, duly authorised to issue Amateur callsigns”. The existing Deed between the AMC and ACMA only has a couple of years of tenure remaining and there may be a change away from the AMC at its expiry, or any subsequent Deed expiry. Naming the AMC in legislation is a severe oversight by the drafters given that the resulting LCD may be in force for many years.

Even the Consultation Paper refers to “*The assignment of call signs will be managed by a third-party provider.*” in the proposed summary of changes.

Further, there could be more than one body responsible for the issue and management of callsigns for the Amateur Service at any one time and the Class Licence LCD must allow for that option in the wording.

My responses to your topics are interspersed for ease of inter-relating the details :

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.)*

In short, no. This has been an inequality ever since other LCD changes were made a few years ago (2019). Broadcasting has long gone from this part of the spectrum and Standard licensees should have been given access back then, but with whatever power limits apply to that Certificate Class.

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

It is imperative that a public resource is used to track the holders of amateur callsigns if the ACMA RRL data is to be discarded. Again, I take exception to the term “AMC” as used in this explanation (Operational aspects of call sign management are the subject of a Deed between the ACMA and the University of Tasmania (via the AMC).....) This document (Proposed amateur class licence and considerations for higher power operation Consultation paper) should NEVER have been issued with this description in place.

The ACMA renewal fee is \$55 per annum for any licence class once issued. My impression was that the introduction of a Class Licence was at \$zero per annum, but is the AMC (or other) going to implement an annual charge for an existing callsign holder ? Are there any public statements to confirm or deny ?

Activities generally have a cost to implement and if the AMC (or other) takes on a greater role, real or imagined, then it seems likely that they could introduce a fee at whatever level they like. I would rather pay the ACMA the existing fee than be at the mercy of the AMC (or other).

To state that I am concerned how costs will be attributed by either the AMC (or another authorised body) to manage callsigns is an understatement. The fees attributed for 2X1 callsigns is currently \$70 per annum, renewable. What guarantees do we have that they will operate fairly once proposed changes come into effect ?? Are fees only going to be attributed to new persons applying for a callsign(/licence) ?

And then again, what will happen if the 5 year Deed between ACMA and AMC is not replaced and a new body takes over callsign and examinations processes ? Is there going to be another messy situation develop then ?

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.)*

I hold an USA Extra Class callsign and it expires after a 10 year interval, and can be renewed again for another 10 years, etc. The FCC requires changes to mailing addresses to be made of its database by the licence holder (through the FCC License Manager) but otherwise there is no "heartbeat".

The issue with having regular checks is that if this is undertaken by email or web login then what happens if the email develops no response in the short term, maybe the holder is travelling or in hospital or otherwise unavailable or has no web access. Are the next re-checks going to happen at regular intervals over an extended period of time or is the callsign just going to be cancelled and then made available for re-allocation ? Remember that a lot of callsign holders are 'getting on in years' and future access via electronic devices should not be taken as a "given".

The existing AMC document on 2X1 callsigns was written such that it had a major hole in it, which some individuals have been making use of by having a "contest" which basically runs all year thus allowing these callsigns to be used anytime. The AMC appear to not have the experience to derive documents without such loopholes, and defeat the 'bush lawyers' at their game. If there is an alternate interpretation possible, these same 'bush lawyers' will find a way to thwart the original intention to provide an 'acceptable outcome'.

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

The number of call signs that can be assigned to a single person can vary depending on individual circumstances. Maybe the holder wants the same suffix allocation against other prefixes because

most international operators still regard the prefix as providing location data. If I wanted VK4ADC plus VK7ADC, VK3ADC and VK1ADC (depending on availability) because I travelled interstate a lot, should the callsign management body inhibit this ?? Sometimes there are 'personal acquaintance' reasons for holding a second or third callsign of a deceased amateur(s).

Many operators will have one, and some maybe a second, callsign thus not really depleting the available callsign base significantly. It has only been the more-recent years where a callsign has been selected by the holder where previously it was done by the "Department" and there was no individual choice. If if desired callsign is not available, regardless of how many calls an individual has, so what ??

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

Reference the section of Table 2 : Public register of call signs being used

Proposed : "Operators of amateur stations authorised under the proposed class licence would not be included on the RRL, and the **ACMA would not maintain any other public register of call signs** assigned to class licensed amateurs, **nor would it impose an obligation on a third party to maintain such a public register**. However, a call sign entity would have to maintain a record of call signs allocated and a 'reserve list', under an arrangement with the ACMA."

"It would be open to the amateurs to develop and maintain one or more opt-in registers.

We are aware that there are a number of online resources that are already used by the amateurs."

I often refer to the RRL data to cross-check the status of callsigns seen on-air. The odd station is operating outside of their licence conditions but removing the ACMA-managed resource completely – and that is what this section amounts to – will make it impossible to verify anything. So if a Foundation or Standard licensee wants to operate at 400W PEP on 18MHz there is nothing available to show that they shouldn't.

The equivalent is to ignore the Advanced, Standard and Foundation certificates and just let everyone run at any RF power level on any band. That is the effective outcome.

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.)*

Such registers have no real meaning if they are not underpinned by callsign issuing authorities. RRL data currently shows licence class for amateur holders, voluntary registers have no data validation process, so are worthless.

Am I aware of any amateur-operated registers ?? Some might say that I have one on my web site (<https://www.vk4adc.com/web/index.php/software-projects/55-vk4adc-utils/191-vk-lic-data>) but in reality it is data re-processed from the RRL data as periodically downloaded. When that RRL disappears then so do any updates to the available data. Due to copyright plus data privacy rules, there is only really accurate beacon and repeater data available there, plus state-by-state Google

KML files as derived from RRL data for the individuals holding Advanced, Standard or Foundation call signs. Could an actual name/address/status (F/S/A) list be created ? Yes.

Is it real-time ? No. Could it be ? No.

I think that the privacy concerns that prevented the annual WIA Callbook from being published publicly come into play here. Any non-ACMA register cannot co-exist with privacy laws - but the ACMA can host one – and currently do so as the RRL and the web query interface known as the Public Register.

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

Given the current economic and COVID statuses, it is unlikely that I will again travel overseas BUT that should not be taken as a NO. There have been family discussions about this topic recently so it could happen, and I would, as in the past, take amateur radio equipment along.

The removal of the RRL data is one factor that might cause issues in that we no longer are provided with a “paper” licence as proof of our licensing status. Nor can we say to the other authority to check the ACMA data lookup as a reasonable option. The Class Licence move removes such links / options to validate an individual’s Australian amateur status.

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.)

The description in the Consultation document suggests a RF power figure of 1500W (as is the case in the USA) might be relevant for activities such as celestial reflection. The comment “Following further deliberation on this matter, we consider these might be appropriately authorised by an assigned scientific licence and propose to expand the access policy for scientific licences to include Advanced amateur frequencies when the proposed amateur class licence commences.” appears to suggest that only through Scientific Licences can there be any increase above 400W PEP.

The ACMA needs to check with their equivalent bodies in other countries where a high power limit is applicable as to the (1) interference issues ; and (2) EMC compliance issues.

The technical knowledge of those who might desire the use of power levels has changed significantly post the 2012-13 outcome. The WIA has made amateurs more aware of EMC through education. I know first-hand because I was a part of that push. The holder of Standard or Foundation licence levels would typically find that their stations would not invoke EMC field strength concerns, however there are the EMC analysis software tools that an Advanced (or other) holder can use to confirm that his/her/their station(s) conform.

I operate on VHF (50 and 144 MHz) and utilise both tropospheric and meteor scatter equipment however my station is modest and therefore there a considerable number of stations in other countries I cannot be heard/seen (digital modes) by. The RF power level is set in the LCD at 120W average power on digital modes (/ 400W PEP) and my typical transmit power is 100W so I am close to the power limit already. The extra 20 watts causes me technical as well as cost issues for a minimal

improvement in EIRP but an increase to 1KW PEP / 250W average makes a 3dB improvement in EIRP and that becomes a worthwhile improvement for experimentation.

I use meteor scatter modes most weekends (as available) and undertake trans-equatorial communications experimentation for many months of the year.

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.)*

There is no reason that any and all modes should not be available to Advanced holders even at powers to 1KW and beyond without the need to apply for, and subsequently renew, scientific licences.

For higher power situations (much higher than 1KW) then MAYBE a scientific licence MIGHT be appropriate. By the same token, very few experimenters would require this RF power level and they would be technically competent to attempt these experiments and already aware of EMC requirements.

The amateur licence is issued for “ the purposes of self training in radiocommunications, intercommunication using radiocommunications, and technical investigation into radiocommunications by persons who do so solely with a personal aim and who have no pecuniary interest in the outcome of the operations of the station “ i.e. gaining knowledge through experimentation and communication.

If the experimentation requires higher-than-normal power to derive useful outcomes then that still falls within the purview of the amateur licence, not an experimental licence.

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.)*

My comments in Section 9 apply here also.

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

A power limit of 1KW (or more) for Advanced holders is a reasonable figure for those who wish to experiment in communications and should become the revised standard, without recourse to a high power permit.

Many will not utilise the higher power as most commonly-available transceivers produce around the 100-200W figure, and without further amplification – adding cost through purchase, design and construction and then finally the increase in their monthly power bills, the EMC trigger conditions are unlikely to be reached.

Those who have a genuine desire to break through the existing limits of signal attenuation will be the only users likely to take up any significant higher power option.

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.)

There is no reason to limit any high power versus frequency operation in legislation. Those who wish to experiment at these levels will already be aware of EMC concerns and will take evasive action. They are the users who will utilise EMC software to check for Level1 or Level 2 compliance.

The general Advanced user will only trigger Level 2 at 400W PEP if they have (a) high gain antennas, (b) low antenna heights, (c) extremely close neighbours. The same holds true for higher power operation as the EIRP is raised by about 2.5:1 (less than 3dB).

Continued awareness is the real answer. Not legislation.

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

Per Section 12, same comments apply.

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

Why is a higher power limit needed?

The typical free-space loss in dB can be determined for almost any path given distance and frequency, power level, antenna gain and feeder losses, and the effect of obstructions. Those calculations provide a receiver input signal level for a specific transmitter power level. The situation can exist where there is no path workable at the standard power levels and this is where the higher power limits come into effect. Those conditions might be required where is no actual calculable path but brute force scattering may achieve the receipt of signals – not otherwise achievable at low power but easily done at high power. An example of this is true tropospheric scatter at VHF to microwave.

Whether that RF power limit is 1KW or 1.5KW is defined in the legislation is of more concern to the ACMA rather than the individuals pursuing this form of experimentation. By all means, leave the power limit for Advanced class holders undefined.

What are the specific limitations of the current power limit?

In some experimentation styles, it is too low to achieve the desired outcomes.

An example may suit to illustrate this point. Some stations in Japan have high power available and in use. Others do not. The trans-equatorial path experiments and communication at 50MHz reveal that we can hear/see their signals well before the reverse is true. We mostly know which stations are known to operate at high power (identifiable by callsign) so they become markers of TEP. Eventually the lower power stations become detectable – maybe – but not always.

What power level is required?

That is a question without background and without defined answers. Every circumstance has different parameters applied. In some cases a power level of 100W might be the correct answer, in others 1KW+ is correct. Radio propagation via such paths does not follow the normal path calculations as every path is different.

My personal experimentation in Meteor Scatter activities has proven to me that high power is more than desirable, it is basically mandatory. Unlike historically earlier times, we have easier back-channels to ask details of transmit power and antenna gains are in use. That provides better insight into what 'power * gain' product ratio is required to achieve a communication path.

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

Much of the experimentation has become easier to evaluate with the introduction of digital techniques using software such as WSJT-X or MSHV on the various amateur bands as low as LF but more commonly at HF, VHF and above. The digital mode implementation brings with it other issues namely equipment frequency stability, timing stability.

By LCD, we are currently allowed to transmit on digital modes with an RF output power of 120W average on any band. In at least some cases, that is not sufficient, and hence my support for a higher power level.

Common names for modes I presently use are FT8, FT4, MSK144, and Q65, but I have been known to use PSK31, RTTY, SSTV and even hand or computer morse previously. Again, all are constrained by the existing 120W power levels (per LCD).

What amateur service frequency bands would be used?

Every band from MF to UHF, and possibly above that also. There are plenty of experimenter types (as against communicators) who would like to explore new boundaries only achievable through higher power.

How often will a higher power level be required?

As required. Not all communication experiments happen all of the time, and not all require the higher RF power levels.

What is the location of the station?

That is a variable factor also. The station might be at an already-known location (eg RRL data) but other times the location might be a short-term stay on/near the top of a mountain. It is entirely dependant on the nature of the experiments, the frequencies used, the antenna style and gain/loss.

There is no defined answer to a generic question.

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.*

In short, no. The Advanced class holders who wish to utilise a higher-than-average transmit power will already be well aware of their 'power * gain' product at any given band and the proximity of those values as EIRP and EMC Level 2 criteria.

Common sense should always be applied : do you walk in front of a microwave dish antenna ? No, because the EIRP can be considerable even with a relatively low transmit power and the transmitter is currently activated. Do you let others do so ? No, even to placing physical barriers to prevent same.

Every case should be considered differently – by the operator given that he/she is more aware of the current operating conditions of the equipment than any ACMA personnel (who might assess this situation) might be.

Summary :

There are too many parts of the transition equation not really confirmed in any of the documentation released, the least of all surrounding the AMC role into the future, or of a body who might replace them.

For a change I am not nit-picking the draft Class Licence document with the exception of previous comments about naming the “AMC” in legislation.

The ACMA wants to devolve the amateur service to a Class Licence status and it appears that wish to do so to decrease the effective cost to the ACMA through funding and resources, and any responsibility that they can divest, and will do so (regardless) without real acceptance of that outcome to the service(s) affected.

Please accept my comments as constructive and contemplate the options suggested above.

Douglas Hunter

QTHR

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