



Australian
Communications
and Media Authority

Proposed changes to amateur licence conditions

Consultation paper

8/08/2019

Eastern and Mountain District Radio Club
(EMDRC)

Response to proposed changes to
amateur licence conditions



Document details

Client name	Eastern and Mountain District Radio Club (EMDRC)
Project name	Response to proposed changes to amateur licence conditions
Registration number	A0011163B
Document title	Proposed changes to amateur licence conditions
Document subtitle	Consultation paper
Document number	20190708-01
Document version	1.0
Version date	8/08/2019
Print date	Thursday, 8 August 2019

Document authorisation

	Name	Signature	Date
Written by	Peter Hartfield	<i>PC Hartfield</i>	8/08/2019
Reviewed by	EMDRC committee	<i>[Signature]</i>	8/08/2019
Authorised by	John Longayroux	<i>[Signature]</i>	8/08/2019

Document history

Version	Date	Author	Description
0.1 Draft	8/07/2019	Peter Hartfield	Initial draft
0.2 Draft	17/07/2019	David Williams	Comments added
0.3 Draft	1/08/2019	Lukas Erlacher	Comments added
0.4 Draft	1/08/2019	Peter Hartfield	Draft for committee review
0.5 Draft	1/08/2019	Lukas Erlacher	Review, corrections, and member comments
0.6 Draft	2/08/2019	Peter Hartfield	Draft for committee review and approval
0.7 Draft	5/08/2019	John Longayroux	Comments reviewed
1.0	8/08/2019	Peter Hartfield	Final for submission to ACMA

Eastern & Mountain District Radio Club Inc. (A0011163B)

Copyright © 2019 All Rights Reserved

This document is the property of Eastern & Mountain District Radio Club Inc.
and may not be copied, transmitted or reproduced by any means without the written permission of
Eastern & Mountain District Radio Club Inc.



Contents

1	Introduction	4
1.1	Purpose	5
1.2	Scope	5
1.3	Definitions and acronyms	5
1.4	References	6
1.5	Acknowledgements	6
2	Changes to advanced amateurs' access to the 3.6 GHz band	8
3	Assessment of requests from the amateur community.....	9
3.1	Requests resulting in proposed changes included in the draft omnibus variation	9
3.1.1	Allow the use of digital modes for foundation licensees	9
3.1.2	Relax restrictions on the use of commercially manufactured equipment	9
3.1.3	Internet-connected repeater use by foundation licensees	9
3.1.4	Relaxation of permitted bandwidths in certain circumstances	9
3.1.5	Clearer definitions of certain terminology	9
3.2	Requests for changes on which the ACMA invites feedback, for possible inclusion in a future draft variation	10
3.2.1	Increased power limit for Foundation and Standard licensees	10
3.2.2	Access to more amateur bands for Standard and Foundation licensees.....	10
3.3	Requests managed under the ACMA's FYSO	10
3.4	Requests that the ACMA does not consider should result in changes to Amateur licence conditions.....	10
3.4.1	Increased power limit for Advanced licensees.....	11
3.4.2	Addition of other bands in the Amateur LCD	11
4	Longer term considerations	12
4.1	Review of call-signs.....	12
4.2	Amateur licensing arrangements	12
4.2.1	Remove the requirement for Standard and Advanced licence candidates to undergo the practical examination	13
4.2.2	Maintain an on-line bank of questions	13
4.2.3	Examinations are conducted by clubs registered with the ACMA as ATOs ...	13
4.2.4	Suggestion to extend licence renewal times.....	13
4.3	Other considerations deemed important by the EMDRC	14
4.3.1	Callsign allocation housekeeping	14

List of tables

Table 1 – Definitions and acronyms.....	6
---	---



1 Introduction

The Eastern and Mountain District Radio Club, known affectionately as the EMDRC, is one of the biggest, most active amateur radio clubs in Australia. The club currently has about 300 active members with another 450 previous members listed in its membership database (a total reach of up to 750 amateurs). The club is now into its 52nd year having celebrated its 50th anniversary in 2017.

The club callsign (VK3ER) is highly regarded and recognised world-wide as one of the most active in Australia. Our website (www.emdrc.com.au) is visited by a significant amount of people both within Australia and overseas and we receive enquiries about posts from many different originating countries including Europe, UK, Japan, and the USA.

The EMDRC is also active on Facebook (@VK3ER), where we have over 700 followers, and can reach over 2500 people in a typical week, posting on average 3 to 4 times a day. Over 50% of club members are also members of the WIA, and we are starting to support some of the activities of RASA – such as QRM Guru.

Other activities where the EMDRC provides benefits to its members and the greater amateur community are:

- Discounts at commercial electronics outlets such as Jaycar, Altronics, Radio Parts, and South Eastern Communications to encourage members to experiment with construction of kits and projects.
- Design and development of kits (hands free, Anderson power pole distribution box, 9 & 6 m mast projects to name just a few). These also encourage amateurs to experiment with construction and are available for anyone to purchase on the club web site.
- The Amateur Television (ATV) group is active within the club, we have an ATV transmitter at the club rooms for members to use and can broadcast special interest events to the amateur community when required.
- We promote the hobby through participation at the Steam-fest in the national steam centre in Scoresby on Labour day weekend, and at the Whitehorse Spring Festival in September each year.
- We conduct Foundation courses on demand with at least 4 scheduled courses a year introducing on average 30 entry level amateurs to the hobby each year.
- We conduct Standard, Upgrade and Advanced training courses further increasing the knowledge and understanding within the Amateur Service.
- We currently have 6 licence assessors registered with the AMC, two of whom have a Certificate IV in Training and Assessment.
- One of our life members is the ARDF coordinator for Australia and encourages world-wide participation.
- Our members submit articles for publication to AR magazine, coordinate callbook layout & publication, Foundation Manual updates & publication, the club Bulletin newsletter, website blogs, presentations at club meetings, papers submitted to GippsTech etc.
- The club facilities are shared with the D-STAR group, makers, hacker space etc. where there is mutual benefit to the groups.
- Our members are active in contests, field days, other national and international events (e.g. international lighthouse and lightship weekend).
- We promote the schools amateur radio club, Jamboree on The Air (JOTA), Amateur Radio on the International Space Station (ARISS) events for schools, and the home brewers' group.
- We are one of the largest WIA news distribution outlets via VK3REC (Sunday and Wednesday broadcasts), with significant numbers of call-backs recorded each week.



- We support the old timers club by providing them access to the club repeater (VK3REC) to broadcast their news once a month.
- Our annual ham-fest is one of the largest in Australia and usually well attended by over 300 amateurs from all over Victoria (some even come from interstate).

For all the above reasons, we believe that the EMDRC is an important amateur radio organisation and that its committee and members are highly representative of the amateur radio community.

1.1 Purpose

The purpose of this document is to provide feedback to the Australian Communications and Media Authority (ACMA) on their “Proposed changes to amateur licence conditions – Consultation paper” [1]. This feedback is provided by the Eastern and Mountain District Radio Club (EMDRC) on behalf of its members, the general amateur radio community, and members of the public that may choose to become an amateur radio enthusiast in the future.

1.2 Scope

The scope of this document is to provide comments and feedback on:

- Changes to advanced amateurs’ access to the 3.6 GHz band.
- Requests resulting in proposed changes included in the draft omnibus variation [2].
- Requests for changes on which the ACMA invites feedback, for possible inclusion in a future draft variation.
- Requests managed under the ACMA’s FYSO [3].
- Requests that the ACMA does not consider should result in changes to amateur licence conditions.
- Longer term considerations:
 - Review of call signs.
 - Amateur licensing arrangements.
 - Other considerations deemed important by the EMDRC.

1.3 Definitions and acronyms

Definition	Meaning
ACMA	Australian Communications and Media Authority
AMC	Australian Maritime College – associated with the university of Tasmania
AR	Amateur Radio
ARDF	Amateur Radio Direction Finding
ARISS	Amateur Radio on the International Space Station
ARRL	American Radio Relay League
ATO	Authorised Training Organisation
ATV	Amateur Television
CW	Continuous Wave
D-STAR	A commercial amateur digital mode developed by Icom
EMDRC	Eastern and Mountain District Radio Club
EMR	Electromagnetic Radiation
FYSO	Five Year Spectrum Outlook (2018-2022) – ACMA [3]



Definition	Meaning
JOTA	Jamboree on The Air – conducted by the Scouting Association of Australia
LCD	Radiocommunications Licence Conditions (Amateur Radio) Determination 2015 [4]
NZART	New Zealand Association of Radio Transmitters
PEP	Peak Envelope Power
Q3	Third Quarter 2019
QSY	Abbreviation for change frequency
RASA	Radio Amateurs Society of Australia
RF	Radio Frequency
STEM	Science Technology Engineering and Maths
UHF	Ultra-High Frequency
VHF	Very High Frequency
WIA	Wireless Institute of Australia

Table 1 – Definitions and acronyms

1.4 References

- [1] Proposed changes to amateur licence conditions – Consultation paper, June 2019, Australian Communications and Media Authority (ACMA)
- [2] Radiocommunications Licence Conditions (Amateur Licence) Omnibus Amendment Instrument 2019 (No.1), 2019, Australian Communications and Media Authority (ACMA)
- [3] Five-year spectrum outlook 2018-22 – The ACMA’s spectrum management work program-final, September 2018, Version 1.1, Australian Communications and Media Authority (ACMA)
- [4] Radiocommunications Licence Conditions (Amateur Radio) Determination 2015, 24 March 2016, Compilation No. 1, Australian Communications and Media Authority (ACMA)

1.5 Acknowledgements

The EMDRC would like to acknowledge the following contributors for this submission.

- Document Authors:
 - John Longayroux VK3PZ – President & Treasurer
 - Lukas Erlacher VK3UKW – Vice President
 - David Williams VK3RU – Secretary
 - Peter Hartfield VK3PH
 - Geoff Atkinson VK3TL
 - Tony Burt VK3TZ
- EMDRC Committee Members:
 - Roger Baker VK3BKR
 - Michael Barrett VK3FLMV
 - Bob Duckworth VK3AIC
 - Jaimie Hall VK3TZE
 - Michael Hyderiotis VK3MHY
 - Layton Moss VK3CLJ



- David Scott VK3FDRS
- Greg Smith VK3ND
- Other significant contributors:
 - Marc Hillman VK3OHM

Plus, all the club members and club guests that provided conversations and feedback on the key topics that went into this submission.



2 Changes to advanced amateurs' access to the 3.6 GHz band

Whilst the Australian Amateur service is currently allocated 3.3 to 3.6 GHz it is appreciated that this band is valuable and its use in this service is lower than other amateur bands. To maintain interest and experimentation within the spectrum utilised by the Amateur service it is suggested that allocation be narrowed to 3.3 to 3.5 GHz enabling continued experimentation and particularly the use of the amateur satellites.

This will remove the need for geographically based restrictions on amateur use of the 3.6 GHz band. It also matches the IARU band plan for all 3 IARU regions.



3 Assessment of requests from the amateur community

We understand that the ACMA would like to simplify licensing for the amateur community by having a single licence for all amateurs.

The EMDRC continues to support the 3-tier level of licences as it provides amateurs an entry and upgrade path as well as distinguishing the level of competency of the operator.

We propose that all licence levels are differentiated by transmission power and transmitting bands only as this encourages further education of the operator in order to advance to the next level.

3.1 Requests resulting in proposed changes included in the draft omnibus variation

We welcome the ACMA's intention to relax license restrictions on Foundation licensees as we believe that the Foundation license should be a full-featured license distinguished only by transmission power and transmitting bands.

3.1.1 Allow the use of digital modes for foundation licensees

We agree, especially as this will stimulate interest from younger digitally inquisitive people interested in Science Technology Engineering and Maths (STEM) subjects. The EMDRC agrees that this is an unnecessary restriction on Foundation licensees. With several current examiners and experts on amateur radio training and qualifications in the club, we are looking forward to assist AMC and ACMA to update training materials and the syllabus to incorporate the necessary knowledge once the change is made.

3.1.2 Relax restrictions on the use of commercially manufactured equipment

We agree and note that licencing based upon power levels and bands will help to limit interference issues commensurate with the level of competency demonstrated based on amateur qualifications.

The EMDRC fully supports the ACMA's proposal that these current restrictions on Foundation Licensees are unnecessary and that they should be permitted to construct their own equipment. Removing this restriction is in the spirit of amateur radio which is intended to facilitate the hobby of amateur radio. Construction and experimentation are a large part of the hobby which should be encouraged.

3.1.3 Internet-connected repeater use by foundation licensees

As licence tiers allow access to all bands, there is no reason to limit Foundation licensee access to the internet and internet-linked repeaters. Furthermore, if they are permitted to use digital modes then there is no reason to limit connection to the internet.

The EMDRC supports the ACMA's proposal to remove the restriction on Foundation licensees connecting to the internet as we agree that this limitation is unnecessary and will not lead to any increased risk of interference to other users or congestion.

3.1.4 Relaxation of permitted bandwidths in certain circumstances

The EMDRC supports the ACMA's argument that the spectral density limits are an effective method to ensure that any risk of interference or congestion from relaxing bandwidths is minimised.

Controlled power levels will limit bandwidth issues provided the band plans are maintained and followed.

3.1.5 Clearer definitions of certain terminology

Agreed as written.



3.2 Requests for changes on which the ACMA invites feedback, for possible inclusion in a future draft variation

We believe that most of the current differentiation between Foundation, Standard and Advanced licences serve little legitimate purpose. In our view, license grades should differ only by allowed bands and power. We welcome that the ACMA expresses respect for the WIA's and RASA's sentiments, however we do not see differentiation of license grades as a useful goal in and of itself, nor do we think that restricting licenses to encourage licensees to upgrade to a higher-tier license is a useful goal.

We believe that the main useful purpose of having multiple grades of license is to minimise the training and qualification needed for a user who desires to undertake specific sanctioned activities to show the competency required for exercising the privileges conferred by the license that allow them to legally carry out those activities.

With all other considerations being of little or no concern to the ACMA, we believe that licenses should be differentiated only by allowed power, bands and frequencies.

3.2.1 Increased power limit for Foundation and Standard licensees

It is evident that RF conditions have worsened both due to natural factors (sunspot cycle), increased use, and the massive proliferation of switched-mode power supplies, voltage converters and other high-frequency components of utility and consumer electrical equipment.

A frequent complaint, also raised by EMDRC members' input to this submission, is that Foundation licensees frequently have difficulties in VHF / UHF mobile operation and operation of FM repeaters due to their low allowed output power.

We believe that foundation licensees should be allowed to use at least 50 w PEP as this is the norm for mobile use. However, since most commercial equipment is capable of 100 w PEP, we believe the ACMA should allow Foundation licensees to use the full power of those transmitters.

We support the increase of power limits for standard licensees to e.g. 200 w. Some commercial transceivers have 200 w capability, or a small linear amplifier can be constructed or purchased if they want to use the extra power. This encourages some construction and experimentation at this level.

3.2.2 Access to more amateur bands for Standard and Foundation licensees

We acknowledge that there is wide-spread disagreement about extending band access for Foundation licensees in the amateur community and even within the working group we assembled for this consultation response. We therefore refrain from making a recommendation other than maintain the Foundation bands as they are – status quo.

We do however agree that Standard licensees should be able to use the full spectrum allocated in the 6 m band (i.e. 50 to 52 MHz). On a VHF / UHF field day, an Advanced licensee would have to QSY from 50.150 MHz to 52.150 MHz to make contacts with Standard licensees. There are no good reasons why Standard licensees can't use that lower part of the band and would encourage more standard operators on the 6 m band especially during field days.

3.3 Requests managed under the ACMA's FYSO

The EMDRC look forward to contributing to the upcoming FYSO discussion paper in Q3 2019-20.

3.4 Requests that the ACMA does not consider should result in changes to Amateur licence conditions

The only additional comment the EMDRC wishes to make in this area is that additional power should be made available for Advanced licensees.



3.4.1 Increased power limit for Advanced licensees

The EMDRC recommends that there should be access to a high-power extra entitlement on the Advanced licence. These would be permitted only for advanced licensees. The licensee might sit an exam enabling higher power simply to demonstrate an understanding on EMR although this is already covered in advanced theory.

Another option could be to enable higher power for an Advanced licensee however they must maintain a logbook that includes an analysis of the station and a column for power level (High / Low). The ACMA could perform an inspection of the station before permitting the high-power entitlement on a case by case basis to mitigate risk.

In both options above, the power limit should be set at 1 kw for an advanced licence. Power levels of up to 1.5 kw are available to Advanced licensees in other countries.

3.4.2 Addition of other bands in the Amateur LCD

The EMDRC has no comments to add regarding additional bands for amateur use. Generally, additional bands would only be accessible to amateurs that were prepared to construct or modify equipment; therefore, we don't think they would be greatly used by the amateur service.



4 Longer term considerations

In view of allowing Foundation licensees to use digital modes, a review and change of the four letter callsigns will be required. The EMDRC's proposal for this is detailed in the following section 4.1.

In section 4.2, the EMDRC discusses an avenue for expanding and improving the examination process by including clubs as Approved Training Organisations (ATO), providing an on-line bank of questions, and conducting all the administration on-line.

In section 4.3, the EMDRC discusses some callsign housekeeping requirements.

4.1 Review of call-signs

RASA's proposal to use the postfix letters QAA-QZZ is not practical for several reasons.

These letters can be confused with the International Q codes used in abbreviating conversations of both CW and voice, which RASA proposes to mitigate by reserving the letters QRA-QSZ. This leaves only 624 available callsigns per state or territory. There are already 714 Foundation licensees in Victoria alone, 90 more than available callsigns in that range, and no room for expansion.

The process of mapping Foundation callsigns from existing allocations to the above scenario would not be straightforward and would leave ACMA's clients dissatisfied having to re-apply for a callsign. The administration requirements for the ACMA would be extremely high.

Instead we propose a much simpler scheme:

Australia has several prefix arrangements for call-signs that can be considered for class licence differentiation. We propose to keep the prefix AX reserved for special event callsigns.

Using the VI prefix for Foundation callsigns, it would be an easy task to move all Foundation Licences from the four-character format to the standard three-character format (e.g. VK3FXYZ could become VI3XYZ). This would still encourage Foundation licence holders to upgrade to a VK based call-sign as these are more widely recognised internationally. Only Advanced licensees should be allocated 2 letter postfixes i.e. do not make these available for Foundation licensees.

4.2 Amateur licensing arrangements

The EMDRC offers the following recommendations for changes to the amateur licensing arrangements.

- Remove the requirement for Standard and Advanced licence candidates to undergo the practical examination.
- Maintain an on-line bank of questions maintained by the AMC and / or qualified amateurs.
- Examinations are conducted by clubs registered with the ACMA as ATO's.
- Extend license renewal times: Offer 10 year or lifetime licenses.

The effects of these changes would be to remove unnecessary parts of the examinations, and turn the maintenance of exam questions, the generation of exams, and the examination process itself back over to amateurs.

This advances the ACMA's stated goal of amateur radio self-government and reduces costs for amateurs by reducing any commercial arrangements.



4.2.1 **Remove the requirement for Standard and Advanced licence candidates to undergo the practical examination**

The EMDRC proposes that the requirement to undergo the practical examination for Standard and Advanced (if they don't already have a Foundation Licence) be removed as it is unnecessary. In our experience, when conducting assessments for candidates that present for Standard or Advanced licences, these candidates already have the necessary competence and skills required.

4.2.2 **Maintain an on-line bank of questions**

The EMDRC proposes that the AMC provide an on-line bank of questions as per the ARRL & NZART. This question bank can be managed by the AMC or suitably qualified assessors (i.e. those with Certificate IV in Training and Assessment).

The on-line bank can then be used to draw from for candidates practice exams and for qualified assessors to construct a paper on the day of the exam. This would eliminate much of the current paperwork and administration currently required by the ACMA / AMC. All the administration requirements, payments, and examinations should be conducted on-line under the supervision of qualified assessors.

4.2.3 **Examinations are conducted by clubs registered with the ACMA as ATOs**

The EMDRC proposes that examinations are conducted by AMC or clubs registered with ACMA as ATO's. To register as an ATO with the ACMA, the club must have at least one member that has a Certificate IV in Training and Assessment.

The purpose for examination for the "Certificate of Proficiency" is to judge if you have acquired knowledge to show your competencies for the level of licence you are sitting, in the following areas:

- EMR & safety.
- Electrical and radio theory.
- Regulations.

Exams are generated from the pool of questions by Assessors:

- This can be either paper or digital.
- If a participant – Fails, instant feedback can be provided by the assessor and the candidate can re-sit if requested (minimal to no cost as assessor generates questions and answer from the pool, all software generated).
- If a participant – Passes, the Certificate of Proficiency is issued immediately, the Assessor uploads the details to the ACMA database with their sign off authorising it. The ACMA database to logs all transactions to comply with the Commonwealth Audit Act. There is minimal input by ACMA other than setup and managing the software.

Licence issue:

- Radio Amateur that has a Certificate of Proficiency, then goes online (ACMA web site) and requests a callsign. Public software shows vacant callsigns. WIA has the software and it can be made available to Radio Amateurs.
- Licences are issued for five or ten years (like a driver's licence or a passport). Radio Amateurs are responsible to keep details current. Renewals are computer generated, up to three notices are sent by email and Radio Amateurs pay minimal amount online to cover administration. This process has minimal input required by the ACMA.

4.2.4 **Suggestion to extend licence renewal times**

The EMDRC is not aware of any reason for amateur apparatus licences to be time restricted. Offering 10 year or lifetime licences would reduce costs considerably for the ACMA and this can be passed on to amateurs.



4.3 Other considerations deemed important by the EMDRC

The EMDRC would like to submit the issues below raised by club members to the attention of the ACMA.

4.3.1 Callsign allocation housekeeping

Over the years, some callsigns have been granted that are inconsistent with the official callsign template. We believe that this should be handled without revoking any licences as this would cause undue costs and burden to everyone involved. However, policies should be in place to ensure improperly allocated callsigns do not go back into the pool of available callsigns once their current allocation ends.

Club member Marc Hillman VK3OHM makes the following observations regarding callsign allocations not being consistent with the callsign template and maintaining the amateur callsign template in the future:

- Some repeater callsigns (of the scheme VK\$Raa) are allocated to apparatus licenses, e.g. VK4RAE, VK3RAN. We recommend ensuring that there is a policy that these callsigns not be allocated to individual apparatus licences when their current holders relinquish them.
- VK2RAS should be removed from the template and added to the reserve list when its current allocation ends. This callsign was a special organisation allocation for the Royal Australian Corps of Signals and should not be allocated to individual apparatus licenses.
- Beacon callsign allocations (of the scheme VK\$RSa, VK\$RTa) are currently not consistent with the template. e.g. VK5VF is completely outside the template. We recommend ensuring that there is a policy that new beacon allocations conform to the template.
- O-Series callsigns (of the scheme VK\$Oaa) should be added to the template for allocation to Advanced licensees. 31 of these callsigns have already been allocated. As we have suggested in section 4.1, reserving those callsigns for a migration of Foundation callsigns is not sensible. This will also make it possible to remove the special case of VK7OTC from the template.