Proposed variation to the Radiocommunications (Low Interference Potential Devices) Class Licence 2015

Discussion paper

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Introduction

The Australian Communications and Media Authority (the ACMA) is proposing variations to the Radiocommunications (Low Interference Potential Devices) Class Licence2015 ([LIPD Class Licence](https://www.legislation.gov.au/Details/F2016C00432)).

Under section 136 of the *Radiocommunications Act 1992*, before varying a class licence the ACMA must invite interested persons to make representations about the proposed variations. This discussion paper provides the context for the proposed variations to help interested parties prepare written comments.

The paper:

* provides an overview of class licensing and the LIPD Class Licence
* provides a description of the proposed variation

provides an invitation to comment on the proposed variation

invites suggestions from industry and individuals on possible devices and technologies for inclusion in future updates

seeks industry views on whether the ACMA should consider arrangements similar to those of recent developments overseas for ‘unlicensed’[[1]](#footnote-1) data communications services in the frequency range 64–71GHz, which could be used to support future ‘5G’ services (for example, backhaul in mobile broadband networks)

seeks industry views on what aspects of the proposed variation should be considered in future standards updates.

A copy of the proposed Radiocommunications (Low Interference Potential Devices) Class Licence Variation Notice 2018 (No. 1) is available on the [ACMA website](https://www.acma.gov.au/theACMA/Consultations/Consultations/Current-and-Closed-Consultations).

The ACMA invites comment from interested parties on the proposed variation by **COB, Friday 19 January 2018**. See the *Invitation to comment* section for information about making a submission.

# Class licensing and the LIPD Class Licence

It is a general requirement of the Act that the operation of all radiocommunications devices within Australia be authorised by a radiocommunications licence.

A class licence is one type of licence available to authorise the operation of radiocommunications devices. It is an effective and efficient means of spectrum management for services where a limited set of common frequencies is employed, and equipment is operated under a common set of conditions.

A class licence sets out the conditions under which any person is permitted to operate any device to which the class licence is applicable—it is not issued to an individual user and does not involve the payment of licence fees. A class licence is issued by the ACMA under section 132 of the Act by making a legislative instrument that is registered on the [Federal Register of Legislation](http://www.comlaw.gov.au/).

The LIPD Class Licenceauthorises the operation of a wide range of radiocommunications devices in various segments of the radiofrequency spectrum. These devices are considered to have a low potential to cause interference to other devices due to their technical and operational characteristics. For example, such characteristics may include:

* low power and operation over short distances (relative to other services operating in the same spectrum)
* low duty cycle of transmissions
* low spectral density compared to other services

that use is limited to indoors, mitigating the potential to cause interference to other devices, or interference can be self-managed by users.

It is a condition of the LIPD Class Licence that the operation of a radiocommunications device does not cause interference to other radiocommunications services (see paragraph 4(1)(b) of the LIPD Class Licence). A device used under the LIPD Class Licence will also not be afforded protection from interference caused by other radiocommunications devices operated under the LIPD Class Licence. In the event that interference does occur, it is the responsibility of the users of the radiocommunications devices authorised by the LIPD Class Licence to take measures to resolve that interference.

The transmitters authorised by the LIPD Class Licence do not require individual frequency coordination for interference management purposes. Examples of equipment covered by the LIPD Class Licence include wireless microphones, electronic road tolling systems, industrial sensors, underground transmitters, Wi-Fi and Bluetooth devices.

In addition to the proposed variation below, the ACMA invites suggestions from industry and individuals on devices and technologies for possible inclusion in the list of transmitters authorised under the LIPD Class Licence for inclusion in future updates.

# Proposed variation

## Overview

In summary, the proposed variation to the LIPD Class Licence consists of:

* adding the frequency range 122–122.25 GHz to arrangements for all transmitters, aligning with European arrangements
* supporting the operation of endoscopy capsules in the frequency range
430–440 MHz
* supporting wireless medical telemetry devices operating in the frequency range 2483.5–2500 MHz

revising technical limitations on existing arrangements for data communication transmitters operating in the 57–66 GHz band to align with changes by the United States Federal Communications Commission (FCC).

## All transmitters (122–122.25 GHz)

### New item 23A of Schedule 1 to the LIPD Class Licence

‘All transmitters’ refers to LIPD authorisations where there is no restriction on the types of applications to be provided. In these cases, the LIPD simply authorises any transmitter operating within a certain technical ‘envelope’. The ACMA is proposing to add new arrangements authorising ‘all transmitters’ in the frequency range
122–122.25 GHz. While no application is specified, initially the measure is intended to support industrial sensors.

The proposed frequency band, 122–122.25 GHz, is to be added for use by transmitters for non-specific applications, after item 23 of Schedule 1. Operation of all transmitters in the 122–122.25 GHz band would be allowed, subject to the limitations set out in column 4 of item 23A, which are:

* the maximum radiated power spectral density must not exceed 10 dBm per 250 MHz

the maximum radiated power spectral density must not exceed –48 dBm per 1 MHz for elevation above 30°.

The elevation restriction in (b) is specified to minimise the interference risk to the Earth exploration satellite service (EESS) operating in the 114.25–122.25 GHz band.

These proposals are based on arrangements in the European Conference of Postal and Telecommunications Administrations Recommendation [ERC Recommendation (70-03)](http://www.erodocdb.dk/Docs/doc98/official/pdf/REC7003e.pdf). If required, information on test methods to assess compliance with these limitations can be found in note 8 to Annex1 of ERC (70-03) and [European Telecommunication Standards Institute](http://www.etsi.org/) (ETSI) Standard EN 305 550.

## Medical telemetry and telecommand

### New items 34A, 35A and 35B of Schedule 1 to the LIPD Class Licence

The ACMA is proposing to add new arrangements to support the use of medical transmitters operating in the 430–440 MHz and 2483.5–2500 MHz bands.

All proposed items (34A, 35A and 35B) are proposed to be supplemented by a note advising that relevant devices will require marketing approval from the Therapeutic Goods Administration.

Item 34A

Item 34A is to support medical endoscopy capsule transmitters. These ultra-low-power wireless medical capsule endoscopy transmitters are used for performing medical observation of the human gastrointestinal tract by swallowing a capsule camera and receiving obtained images by an external dedicated recorder receiver.

Medical endoscopy capsule transmitters would operate in the 430–440 MHz band and with maximum EIRP up to 100 nW. This arrangement is proposed to be supplemented by a new Note 3, advising that transmitters complying with ETSI Standard EN 303 520 will meet the requirements for this item.

Item 35A

Item 35A is to support medical body area network (‘MBAN’) systems. These low-power radio systems are used for transmission of non-voice data to and from medical devices for the purposes of monitoring, diagnosing and treating patients by medical professionals. They are designed to be deployed in healthcare facilities, patients’ homes and ambulances.

Operation of MBAN transmitters in the 2483.5–2500 MHz band would be subject to the limitation set out in column 4 of item 35A:

The transmitter must comply with ETSI Standard EN 303 203.

[ETSI Standard](http://www.etsi.org/) EN 303 203 is a European standard that describes technical characteristics and test and performance requirements for medical body area network systems operating in the 2483.5–2500 MHz frequency range.

There is a related change to Schedule 2 to the LIPD Class Licence, to reflect the inclusion of EN 303 203.

Item 35B

Item 35B is to support low-power active medical implants. Active medical implant communication systems are intended to provide high-speed communication capability between individuals with implants and medical practitioners for the purpose of diagnosing and delivering therapy to individuals with various illnesses.

Operation of low-power active medical implants transmitters in the 2483.5–2500 MHz band would be subject to the limitation sets out in column 4 of item 35B:

The transmitter must comply with ETSI Standard EN 301 559.

[ETSI Standard](http://www.etsi.org/) EN 301 559 is a European standard that defines spectrum monitoring and access requirements designed to significantly reduce any interference potential between active medical implant systems and other primary or secondary users of the band.

There is a related change to Schedule 2 to the LIPD Class Licence, to reflect the inclusion of EN 301 559.

## Data communication transmitters (57–66 GHz)

### Change to item 65 of Schedule 1 to the LIPD Class Licence

The ACMA is proposing to revise existing arrangements for data communication transmitters operating in the 57–66 GHz band to align with changes by the FCC.

The ACMA first introduced arrangements for data communications transmitters in the frequency range 57–66 GHz in 2007, following US and European developments. In 2013, the FCC changed the way technical limitations are specified for these devices by replacing average and peak power density with EIRP limits, due to difficulties in obtaining accurate power density measurements.[[2]](#footnote-2) That change resulted in differences in the way technical limitations were specified in Australia and the US for the same equipment, creating an ambiguity about whether equipment meeting FCC arrangements also meets Australian arrangements. The purpose of these changes is to remove that ambiguity by directly referring to FCC requirements.

The proposal is to omit the limitation to indoor use from the column one class of transmitter and replace all four existing limitations with a single limitation in column four of item 65 that states:

The transmitter must comply with FCC Rules Title 47 Part 15 Section 255.

In 2016, the FCC made additional changes to arrangements of Part 15, Section 255[[3]](#footnote-3) to include the frequency range 64–71 GHz and provide further options for data communications intended to support future ‘5G’ services (for example, backhaul in mobile broadband networks). Similar proposals are also under consideration by Innovation, Science and Economic Development Canada.[[4]](#footnote-4)

The ACMA recognises that the introduction of similar arrangements may be beneficial for 5G development in Australia. While not proposing changes in this update, the ACMA is considering whether similar changes should be considered in future updates and seeks industry views about the need for such arrangements.

## Consequential updates to AS/NZS 4268

The LIPD Class Licence operates in concert with the Radiocommunications (Short Range Devices) Standard 2014 (SRD Standard) made by the ACMA under section 162 of the Act. The LIPD Class Licence regulates the operation of certain devices, while the SRD Standard (augmented by labelling and record-keeping requirements) regulates the supply of those devices to the market.

The SRD Standard references the Standards Australia industry standard AS/NZS 4268 (as in force or existing from time to time). Typically, Standards Australia updates AS/NZS 4268 after the making of the Variation to reflect the changes to the LIPD Class Licence as a part of regular procedural review.

To assist any review by Standards Australia as part of this consultation, the ACMA is also seeking views from industry on which aspects (if any) of the proposed updates in this paper should be considered in any future update of AS/NZS 4268.

The ACMA’s preliminary view is that only the update for data communication transmitters (57-66 GHz) may warrant an update to AS/NZS 4268 because of the potential for a large number of devices to be operated under the proposed updates.

The other updates are for specialised devices which are likely to be used in controlled environments with minimal risk of interference caused by their operation. In the case of medical devices, there are additional regulatory controls in place (via the Therapeutic Goods Administration). Consequently, the risk does not seem to warrant imposing the regulatory burden of compliance with a standard on industry for these devices.

# Invitation to comment

## Making a submission

The ACMA invites comment on its proposed variation instrument:

* [**Online submissions**](http://www.acma.gov.au/theACMA/Consultations/Consultations)—submissions can be made via the comment function or by uploading a document. The online consultation page provides details.
* By email to freqplan@acma.gov.au
* **Submissions by post**—can be sent to:

Manager
Spectrum Engineering Section
Australian Communications and Media Authority
PO Box 78
Belconnen Act 2616

**The closing date for submissions is COB, Friday 19 January 2018.**

Electronic submissions in Microsoft Word or Rich Text Format are preferred.

Enquiries

* Consultation enquiries can be sent to Manager, Spectrum Engineering, by email to [freqplan@acma.gov.au](file:///C%3A/Users/SForst/AppData/Local/Microsoft/Windows/Temporary%20Internet%20Files/Content.Outlook/PFDEVLTP/freqplan%40acma.gov.au).

Media enquiries can be directed to Emma Rossi on 02 9334 7719 or by email to media@acma.gov.au.

Effective consultation

The ACMA is working to enhance the effectiveness of its stakeholder consultation processes, which are an important source of evidence for its regulatory development activities. To assist stakeholders in formulating submissions to its formal, written consultation processes, it has developed [*Effective consultation—a guide to making a submission*](http://www.acma.gov.au/theACMA/About/Corporate/Responsibilities/acma-evidenceinformed-regulation-and-effective-consultation). This guide provides information about the ACMA’s formal written public consultation processes and practical guidance on how to make a submission.

Publication of submissions

In general, the ACMA publishes all submissions it receives. The ACMA prefers to receive submissions that are not claimed to be confidential. However, the ACMA accepts that a submitter may sometimes wish to provide information in confidence. In these circumstances, submitters are asked to identify the material over which confidentiality is claimed and provide a written explanation for the claim.

The ACMA will consider each confidentiality claim on a case-by-case basis. If the ACMA accepts a claim, it will not publish the confidential information unless authorised or required by law to do so.

Release of submissions where authorised or required by law

Any submissions provided to the ACMA may be released under the Freedom of Information Act 1982 (unless an exemption applies) or shared with various other Commonwealth Government agencies and certain other parties under Part 7A of the Australian Communications and Media Authority Act 2005. The ACMA may also be required to release submissions for other reasons including for the purpose of parliamentary processes or where otherwise required by law (for example, under a court subpoena). While the ACMA seeks to consult submitters of confidential information before that information is provided to another party, the ACMA cannot guarantee that confidential information will not be released through these or other legal means.

Privacy

The [*Privacy Act 1988*](http://www.comlaw.gov.au/Series/C2004A03712) imposes obligations on the ACMA in relation to the collection, security, quality, access, use and disclosure of personal information. These obligations are detailed in the [*Australian Privacy Principles*](http://www.oaic.gov.au/privacy/privacy-resources/privacy-fact-sheets/other/privacy-fact-sheet-17-australian-privacy-principles) that apply to organisations and Australian Government agencies.

The ACMA may only collect personal information if it is reasonably necessary for, or directly related to, one or more of its functions or activities.

The purposes for which personal information is being collected (such as the names and contact details of submitters) are to:

* contribute to the transparency of the consultation process by clarifying, where appropriate, whose views are represented by a submission

enable the ACMA to contact submitters where follow-up is required or to notify them of related matters (except where submitters indicate they do not wish to be notified of such matters).

The ACMA will not use the personal information collected for any other purpose, unless the submitter has provided their consent or the ACMA is otherwise permitted to do so under the Privacy Act.

Submissions in response to this paper are voluntary. As mentioned above, the ACMA generally publishes all submissions it receives, including any personal information in the submissions. If a submitter has made a confidentiality claim over personal information, which the ACMA has accepted, the submission will be published without that information. The ACMA will not release the personal information unless authorised or required by law to do so.

If a submitter wishes to make a submission anonymously or use a pseudonym, they are asked to contact the ACMA to see whether it is practicable to do so in light of the subject matter of the consultation. If it is practicable, the ACMA will notify the submitter of any procedures that need to be followed and whether there are any other consequences of making a submission in that way.

Further information on the Privacy Act and the ACMA’s privacy policy is available at [www.acma.gov.au/privacypolicy](http://www.acma.gov.au/privacypolicy). The privacy policy contains details about how an individual may access personal information about them that is held by the ACMA, and seek the correction of such information. It also explains how an individual may complain about a breach of the Privacy Act and how the ACMA will deal with such a complaint.



Radiocommunications (Low Interference Potential Devices) Class Licence Variation 2018 (No. 1)

*Radiocommunications Act 1992*

The AUSTRALIAN COMMUNICATIONS AND MEDIA AUTHORITY makes this Variation under section 132 of the *Radiocommunications Act 1992*.

Dated  2018

Member

Member/General Manager

Australian Communications and Media Authority

1 Name of instrument

 This instrument is the *Radiocommunications (Low Interference Potential Devices) Class Licence Variation 2018 (No. 1)*.

2 Commencement

 This instrument commences on the day after it is registered on the Federal Register of Legislation.

 *Note* All legislative instruments must be registered on the Federal Register of Legislative Instruments required to be maintained under the *Legislative Instruments Act 2003*.

3 Variation of *Radiocommunications (Low Interference Potential Devices) Class Licence 2015*

 Schedule 1 varies the *Radiocommunications (Low Interference Potential Devices) Class Licence 2015* [F2016C00432].

Schedule 1 Variations

(section 3)

[1] Schedule 1, after item 23

insert

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 23A | All transmitters | 122000-122250 | See limitations | 1. The maximum radiated power spectral density must not exceed 10 dBm per 250 MHz
2. The maximum radiated power spectral density must not exceed -48 dBm/MHz for elevation above 30°
 |

**[2] Schedule 1, after item 34**

*insert*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 34A | Medical endoscopy capsule transmitters(see Note 2 and Note 3) | 430-440 | 100 nW |  |

**[3] Schedule 1, after item 35**

*insert*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 35A | Medical body area network transmitters(see Note 2) | 2483.5-2500  | See limitations | The transmitter must comply with ETSI Standard EN 303 203 |
| 35B | Low power active medical implant(see Note 2) | 2483.5-2500  | See limitations | The transmitter must comply with ETSI Standard EN 301 559 |

**[4] Schedule 1, item 65, Column 1**

 *omit* ‘used indoors’

**[5] Schedule 1, item 65, Column 4 – Limitations**

 *omit paragraphs (a) to (d) and substitute*

The transmitter must comply with FCC Rules Title 47 Part 15 Section 255

**[6] Schedule 1, *Note 2***

 *substitute*

*Note 2* The systems and associated medical implant communications systems transmitters mentioned in items 33, 34, 34A, 35A and 35B are devices that require marketing approval from the Therapeutic Goods Administration.

**[7] Schedule 1, immediately following *Note 2***

 *insert*

*Note 3* A transmitter that complies with ETSI Standard EN 303 520 will meet the requirement not to exceed the maximum EIRP limit specified at item 34A.

**[8] Schedule 2, after item 5**

 *insert*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 5A | 35A | EN 303 203 | *Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Medical Body Area Network Systems (MBANSs) operating in the 2483.5 MHz to 2500 MHz range;*  | ETSI  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 5B | 35B | EN 301 559 | *Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Low Power Active Medical Implants (LP-AMI) operating in the 2483.5 MHz to 2500 MHz range;*  | ETSI  |

**[9] Schedule 2, after item 17**

 *insert*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 18 | 65 | Code of Federal Regulation Title 47 §15.255 | *Part 15, Section 255 Operation within the band 57-71 GHz* | FCC  |

**Commonwealth of Australia**

**AUSTRALIAN COMMUNICATIONS AND MEDIA AUTHORITY**

**Radiocommunications Act 1992**

Notice under section 136 of the *Radiocommunications Act 1992*

NOTIFICATION OF THE DRAFT *RADIOCOMMUNICATIONS (LOW INTERFERENCE POTENTIAL DEVICES) CLASS LICENCE VARIATION 2018 (NO.1)*

Notice is given under section 136 of the *Radiocommunications Act 1992* (the Act) of the draft *Radiocommunications (Low Interference Potential Devices) Class Licence Variation 2018 (No.1)* (the draft Variation) proposed to be made by the Australian Communications and Media Authority (ACMA) under section 132 of the Act. The draft Variation proposes to amend existing arrangements and to add new arrangements for a number of short range low power devices by varying the *Radiocommunications (Low Interference Potential Devices) Class Licence 2015* (the LIPD Class Licence).

**Proposed changes**

The LIPD Class Licence contains the licence conditions, operational requirements and technical parameters associated with a wide range of low power radiocommunications devices operating in various segments of the radiofrequency spectrum.

The draft Variation proposes to amend the LIPD Class Licence by:

* updating referenced standards;
* inserting new frequency bands for all transmitters;
* inserting new frequency bands for medical telemetry and telecommand transmitters; and
* removing some limitations on the use of data communication transmitters.

Copies of the LIPD Class Licence, the draft Variation, and the discussion paper explaining the above amendments in more detail are available on the ACMA’s website (www.acma.gov.au) and hardcopies may be obtained from the ACMA by contacting:

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**Comments**

Under section 136 of the Act, the ACMA is seeking representations about the draft Variation.

Interested persons are invited to make representations about the proposed variation no later than 19 January 2018. Representations should be in writing and should be addressed to:

The Manager, Spectrum Engineering Section

Australian Communications and Media Authority

PO BOX 78

BELCONNEN ACT 2616

or by email to:

freqplan@acma.gov.au

1. Overseas devices authorised under class licences in Australia are in some other jurisdictions often termed ‘unlicensed’ or ‘licensed-exempt’. [↑](#footnote-ref-1)
2. See [FCC 13-112: Report and Order – Part 15 rules for Unlicensed Operation in the 57-64 GHz Band](https://www.fcc.gov/document/part-15-rules-unlicensed-operation-57-64-ghz-band), at paragraph 10. [↑](#footnote-ref-2)
3. See [FCC 16-89: Report and Order and Further Notice of Proposed Rulemaking](https://www.fcc.gov/document/spectrum-frontiers-ro-and-fnprm), sections D and G.6. [↑](#footnote-ref-3)
4. See [Consultation on Releasing Millimetre Wave Spectrum to Support 5G](https://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf11298.html). [↑](#footnote-ref-4)