



Australian Government
**Australian Communications
and Media Authority**

Australia's regulator for broadcasting, the internet, radiocommunications and telecommunications

www.acma.gov.au

Dealing with Applications for Apparatus Licences for the Trial of New Radiocommunications Technologies— Guidelines

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Introduction

THE STATUTORY SCHEME

The Australian Communications and Media Authority (ACMA) manages the radiofrequency spectrum.

As part of its management of the radiofrequency spectrum, ACMA may issue apparatus licences under section 100 of the *Radiocommunications Act 1992* (the Radcomms Act) authorising the operation of radiocommunications transmitters and receivers.

Apparatus licences must be of a type determined by ACMA under section 98 of the Radcomms Act. Scientific licences are one type of apparatus licence and may be issued for scientific purposes including trials of new radiocommunications technologies. Further information may be found on the [ACMA website](#).

The part of the radiofrequency spectrum that is used for transmission of commercial, national and community radio and television broadcasting is called the broadcasting services bands (BSB). Special considerations apply to the management of spectrum in the BSB. ACMA may not issue licences authorising the operation of a transmitter in the BSB unless it has made spectrum available for the relevant purpose. BSB spectrum may be made available:

- for a long-term broadcasting service in a licence area plan determined under section 26 of the *Broadcasting Services Act 1992* (the BSA); or
- for temporary periods under section 34 of the BSA.

PURPOSE OF THE GUIDELINES

These guidelines outline how ACMA will deal with the issue of scientific licences for trials of new radiocommunications technologies. The guidelines cover processes for:

- issuing scientific apparatus licences for the purpose of conducting trials of new radiocommunications technologies; and
- making BSB spectrum temporarily available under section 34 of the BSA for the purposes of conducting such trials using a scientific apparatus licence.

This includes applications for licences for the purpose of trialling digital radio. These guidelines incorporate and replace the *Digital Radio Trials Using the Broadcasting Services Bands Policy Guidelines* previously released by ACMA in March 2006.

The guidelines do not apply to other purposes for which scientific licences may be issued, such as research into radiocommunications or the testing of equipment.

These guidelines do not bind ACMA or its delegates. ACMA and its delegates will consider each request or application and its merits on a case-by-case basis.

Trials of new radiocommunications technologies

ACMA facilitates trials of new technologies, including broadcasting technologies, by issuing appropriate scientific apparatus licences for that purpose. Licences are issued only where radiofrequency spectrum can be allocated with the expectation that no interference will be caused to existing services.

Licences may be issued for both BSB and non-BSB spectrum. In addition to an apparatus licence issue process, if BSB spectrum is to be used, under section 34 of the BSA it must first be made available for a temporary period.

PURPOSE OF TRIALS

Scientific licences may only be issued for trials of new radiocommunications technologies that *primarily* relate to trialling of technical functions. However, trials may include incidental market testing or testing of other aspects of the technology such as performance testing to develop, prove and apply new technology.

These guidelines do not apply to applications for apparatus licences to conduct trials that primarily relate to the non-technical aspects of new technologies. For example, the guidelines do not apply to trials with a primary purpose of market development.

ACMA may refuse an application for a scientific licence if it is not satisfied that:

- a proposed trial primarily relates to trialling of the technical functions of the specified technology; or
- the location, duration or other attributes of the trial proposal are consistent with the expressed purpose of the trial.

Competing demand to conduct trials at a particular location or part of the spectrum may require compromises. Under these or other circumstances, ACMA may refuse to issue a scientific licence or suggest a different location or duration for the trial.

DURATION OF TRIALS

Scientific licences for trials of new radiocommunications technologies will generally have a maximum duration of 12 months and will not generally be extended or renewed beyond this time.

Triallists should not expect that new scientific licences for similar trials will be issued once the scientific licence for the original trial has concluded.

SCIENTIFIC LICENCES

Scientific apparatus licences are determined in the *Radiocommunications (Transmitter and Receiver Licences) Determination*.

Under the *Radiocommunications (Interpretation) Determination 2000*, there are two kinds of scientific licences:

1. Scientific assigned—where an individual frequency is to be coordinated and assigned.
2. Scientific non-assigned—where standard frequencies set aside for general scientific purposes in the *Radiocommunications Licence Conditions (Scientific Licence)*

Determination 1997 apply¹, or where testing takes place in a screened room or into a non-radiating dummy load.

Where a trial of a new radiocommunications technology is more appropriately undertaken under a type of apparatus licence other than a scientific licence, these guidelines will not apply. Such applications will be considered on a case-by-case basis in accordance with any applicable policy or guidelines.

ACMA does not issue scientific licences for the operation of equipment that does not comply with standards made under the Radcomms Act. ACMA will not issue scientific licences if another type of licence determined under section 98 of the Radcomms Act (for example, a broadcasting licence) may be issued for the purpose.

Scientific licences, including those issued for the purpose of conducting trials of new radiocommunications technologies, will generally be issued on a ‘no protection, no interference’ basis. This means that operators must not cause interference to other radiocommunications services and have no entitlement to protection against interference themselves.

For more information about scientific licences including scientific assigned licences and scientific non-assigned licences, consult the scientific licence information paper on [ACMA’s website](#).

Note that applications for scientific licences for purposes other than trials of new technologies are not covered by these guidelines and will be considered on a case-by-case basis in accordance with any applicable policy or guidelines.

SPECTRUM AVAILABILITY

ACMA facilitates the operation of radiocommunications frequencies for trials of new radiocommunications technologies in line with:

- the object of the BSA to promote the availability of a diverse range of broadcasting services to audiences within Australia; and
- the object of the Radcomms Act to maximise the overall public benefit derived from using the radiofrequency spectrum.

However, ACMA must also act in a manner that promotes stable regulatory arrangements, particularly in the BSB, and must generally promote the efficient use of the radiofrequency spectrum. Taking this into account, ACMA gives priority to the planning of long-term services and does not necessarily reserve spectrum for possible trials of new radiocommunications technologies.

Scientific licences for trials of new radiocommunications technologies will generally be issued on an ‘opportunity basis’. That is, they will generally be issued where there is available spectrum that is not already in use for other purposes and will not cause interference to existing, licensed services.

In general, the Australian communications sector continues to grow rapidly and the demand for access to the radiofrequency spectrum is increasing. Often, many services compete for access to the same spectrum resources. Demand is particularly strong in metropolitan areas and is sometimes unmet because of spectrum scarcity. This is especially the case for FM

¹ The standard frequencies that have been set aside do not fall within the BSB.

radio spectrum (87.5 MHz to 108 MHz) in the BSB. While ACMA takes every reasonable opportunity to make spectrum available for trial purposes, in some cases it will not issue a licence where:

- the requested spectrum is already in use;
- although the requested spectrum is available, ACMA considers it more appropriate to withhold its use for another purpose; and/or
- use of the requested spectrum is likely to cause interference to licensed services.

As ACMA cannot guarantee the availability of spectrum for trial purposes, the issue of a licence for a specific trial purpose should not be taken as an indication of future availability.

In particular:

- allocation of spectrum for a trial confers no rights to use of that spectrum other than for the purpose and duration of the trial;
- allocation of a part of the spectrum for a trial does not preclude trials of other systems using that spectrum or imply that the application being trialled will be the preferred user of that spectrum in the future;
- permission to trial a particular technological system does not imply the system will be introduced into Australia permanently or, if it is, that it will use the same part of the spectrum as the trial service;
- the fact of participation in a trial does not imply the trial participant will be permitted to operate the system being trialled if the Australian Government decides on its permanent introduction;
- in any application involving the participation of the public, potential triallists should address the issue of access to equipment in the marketplace for the proposed tests, how equipment will be made available in the market and how consumers will be made aware of the temporary nature of the trial; and
- people who acquire equipment in connection with trials, including retailers or members of the public who purchase receivers to participate in trials, or receive trial services, do so at their own risk that the trial may be discontinued.

Applications for trials

ACMA will consider applications for scientific licences for the purpose of conducting trials of new radiocommunications technologies on a case-by-case basis. However, ACMA may call for expressions of interest in conducting trials in any given locality, including after receiving an application to conduct a trial. Inviting additional applications may be a more equitable way to ensure access to trials.

Applicants wishing to conduct a new technology trial should write to ACMA (at the address given on p.10). Applications must include the appropriate completed form (see p.5) and must address the matters outlined in ‘Matters to be considered’ as set out on p.6, including the purpose of the trial, and how it relates to the duration, location and spectrum requested in the application.

WHO CAN APPLY?

Only those who are currently, or will in the near future, be in a position to commence a trial of new radiocommunications technologies should apply. ACMA will require evidence of this preparedness, as outlined below.

LICENCES FOR BSB SPECTRUM

1. Complete [Form ACMA B12](#) (*Application for a Transmitter Licence in the Broadcasting Services Bands*).
2. Attach any supporting documents to the completed form ACMA B12.
3. Send completed forms and checklist to ACMA at the address on p.10.

LICENCES FOR NON-BSB SPECTRUM

1. Complete [Form ACMA R057](#) (*Application for Apparatus Licences*).
2. If indicated, complete the technical page in [Form ACMA R077](#) (*Additional station information*).
3. Send the completed forms and any supporting documents to ACMA at the address on p.10.

Applicants may also make additional submissions or include extra material in support of the request to make spectrum available. This may be necessary where the operational requirements are particularly complex, including where large numbers of frequencies are involved. The matters that ACMA takes into account for this purpose are discussed on p.6.

COMPLETING APPLICATION FORMS

ACMA expects applicants to include appropriate technical specifications for the proposed apparatus licence when completing forms B12, R057 and R077.

The applicant is responsible for identifying appropriate technical specifications for the proposed apparatus licence. ACMA's role is limited to assessing the suitability of the technical specifications provided by the applicant.

Before an apparatus licence is issued, ACMA will also need to consider evidence that the applicant is prepared to conduct the trial from the indicated date. Such evidence may include details of technical capacity, evidence that the applicant has access to the nominated transmitter site and details of any necessary interference management strategy.

ACMA may disregard applications that are not substantially complete, including where requested technical information has not been supplied. It is important for the applicant to identify appropriate technical specifications because ACMA may refuse an application if:

- it considers the operation of an apparatus in accordance with the proposed technical specifications may result in interference; or
- it is otherwise considered inappropriate for the needs of the trial.

ACMA relies on the accuracy of the information provided by the applicant. Any interference or other liability arising from the issue of a licence on the basis of incorrect or inaccurate information by the applicant shall rest with the applicant and/or the person operating the device authorised by the licence. In any case, ACMA cannot guarantee that interference will not occur, even if correct information is provided. Licences are generally issued on a 'no interference, no protection' basis (see p.9).

To ensure the timeliest outcome for an application, applicants who do not have the technical expertise to propose appropriate technical specifications, or are otherwise unsure about how to proceed, should consult an appropriately qualified consultant. In some cases, the services of an ACMA Accredited Person may be useful—a list of Accredited Persons is available on the [ACMA website](#).

WHEN TO APPLY

Applications for licences for trials of new radiocommunications technologies should be lodged at least 90 days prior to the preferred start date of the trial, to allow ACMA sufficient time to consider the matters before that date. Where ACMA makes a written request to the applicant for more information about the proposal, ACMA may require further time to consider the application.

Consequently, where a proposed trial involves significant use of spectrum or involves complex spectrum planning work it is recommended that applicants submit the application as early as possible prior to the trial's intended commencement date. ACMA will endeavour to meet licensing requirements to ensure applicants are able to commence trials on the date nominated. However, ACMA requires firm commitments from applicants that trials will commence by the date nominated and may decide to make a scientific licence conditional on such matters. ACMA will not generally make spectrum available under a licence in the event it is not likely to be used, especially where spectrum is very scarce.

ACMA may not be able to consider an application in time for the nominated start date for a trial if that application is received too close to that date.

Matters to be considered

ACMA may issue scientific licences for trials of new radiocommunications technologies if the relevant spectrum is not being used for any other purpose. Spectrum is usually considered unavailable if it is already licensed, reserved or planned for another purpose.

Apparatus licences for spectrum are issued under section 100 of the Radcomms Act, which provides that, when deciding to allocate such a licence, ACMA must have regard to:

- the effect on radiocommunications of the proposed operation of transmitters under the licence, including the risk of interference;
- whether the person proposed to operate the licence is appropriately qualified;
- any risk of death or injury, or loss of or damage to property from the operation of the proposed transmitters;
- if the relevant spectrum is in the BSB, whether it has been made available under section 34 of the BSA (see below); and
- all matters that ACMA considers relevant.

OTHER RELEVANT MATTERS

Matters that ACMA is likely to consider relevant when deciding whether to issue an apparatus licence for a trial of new radiocommunications technology may include, but are not limited to:

- whether the applicant was the holder of an apparatus licence that has been cancelled in the previous two years (see section 100(5) of the Radcomms Act);
- the purpose of the trial, including whether it is for the purposes of marketing a new service;
- the nominated date for commencement of the trial and its duration;
- the preparedness of the applicant to commence a service on the nominated date;
- spectrum availability (having regard to the location and time of the trial);
- whether the trial could practicably proceed using a different location or spectrum;
- resources required for interference management;
- the need for and relevance of the information to be obtained through the proposed trial;
- the willingness of the applicant to work with ACMA where the information gathered from the trial could be of interest to ACMA or the Australian Government, as well as the triallist;
- the time necessary to assess the proposed technical specifications compared to the duration of the trial;
- whether the proposed service will meet relevant licence conditions; and
- whether the type of service in the application is consistent with the use for which the spectrum has been allocated in the Australian Radiofrequency Spectrum Plan and any relevant Band Plan(s).

ACMA may refuse to issue a licence if it is not satisfied it should do so after consideration of all relevant matters.

Competing applications

ACMA may receive multiple applications for apparatus licences for the purpose of conducting trials. In some cases it is possible that not all can be granted, usually because the applicants are seeking to use the same spectrum during the same or overlapping periods, in a location where demand for spectrum exceeds supply.

If these situations arise, ACMA's preference is for aspirant triallists to resolve competing demands through a process of negotiation. However, if negotiation does not produce a workable solution, the principles used to guide ACMA in reaching a decision may include:

- the purpose of each of the trials;
- the date and order in which the applicant expressed an interest in conducting the trial;
- the preparedness of each applicant to commence a service on the nominated date;
- the nominated date and duration of the trial;
- whether the trial could practicably proceed using a different location or frequencies; and

- such other matters as ACMA considers relevant;

Special note

This is not an exclusive list of matters that ACMA may consider relevant in dealing with particular applications. Particular circumstances may raise particular considerations not listed here.

SPECIAL REQUIREMENTS FOR BSB SPECTRUM

Under section 34(1)(g) of the BSA, ACMA may make unused BSB spectrum available temporarily for various purposes, including to facilitate trials of new radiocommunications technologies.

However, as discussed above, some parts of the BSB spectrum in Australia are already heavily congested; in particular, FM radio frequencies in regional and metropolitan areas. As a result, BSB spectrum is often very scarce. Noting the matters listed below, where an application is made for a scientific licence in scarce BSB spectrum, ACMA may decide not to make spectrum available if it considers that the trial does not warrant its use.

ACMA may not make BSB spectrum available temporarily unless the planning and licensing process for that spectrum is incomplete, or unless the planning is complete but spectrum remains unallocated. If so, when considering whether to make such spectrum available for a trial of new radiocommunications technology, ACMA must:

- promote the objects of the BSA, including the economic and efficient use of the radiofrequency spectrum; and
- have regard to the planning criteria in section 23 and matters in section 34(2) of the BSA, including:
 - demographics;
 - relevant social and economic characteristics;
 - the demand for the service to be provided on the spectrum;
 - developments in technology;
 - technical constraints to the provision of the proposed broadcasting service;
 - other demand for the spectrum, including other purposes for which the spectrum may be put during the relevant period;
 - future demand for the spectrum; and
 - such other matters as ACMA considers relevant.

Other relevant matters may include:

- the purpose of the trial;
- local spectrum scarcity;
- the nominated date and duration of the trial;
- the willingness of the applicant to sign an undertaking about the short-term nature of the trial;
- whether the trial could practicably proceed using a different location or channel;

- whether the applicant already holds a licence for a similar trial in a different market; and
- the need for and relevance of the information to be obtained through the proposed trial.

When ACMA issues licences

NO INTERFERENCE, NO PROTECTION

As indicated above, scientific licences issued for the purpose of conducting trials of new radiocommunications technologies will generally be issued on a ‘no protection, no interference’ basis. This means that operators must not cause interference to other radiocommunications services and have no entitlement to protection against interference themselves.

Trials of new radiocommunications technologies are inherently experimental and may not have established protection parameters. Consequently, even where a licence is issued for an assigned frequency, the ‘no protection, no interference’ caveat applies.

REPORTING REQUIREMENTS

Successful trial applicants may be required to provide reports to ACMA on the outcome of the trial (technical and non-technical aspects) both during its operation and at its conclusion. Reports should be framed to address the purpose, parameters and objectives of the trial, and any other matters as determined by ACMA. Reports are to be provided in a timely fashion and may be made available to the minister, his/her office or department, or released publicly, subject to confidentiality considerations.

NON-RENEWABLE LICENCES

Licences for trials of new radiocommunications technologies will generally not be renewed beyond 12 months and confer no entitlement to a new licence for the same or a similar trial being issued at any time in the future.

PAYMENT OF CHARGES AND TAXES

ACMA will not issue licences until it receives payment of related charges and taxes. These are discussed below, although applicable charges and taxes are available in the *ACMA Apparatus Licence Fee Schedule* on the [ACMA website](#).

Administrative charges

When applying for an apparatus licence, applicants must pay an administrative charge equal to the cost incurred by ACMA in dealing with the application, irrespective of whether a licence is eventually issued.

The administrative charge includes the time taken by ACMA to assess the technical specifications of the service. This charge may be significant if a lengthy assessment of the proposed specifications of the transmitter is necessary to ensure that the transmitter will not interfere with existing licensed services.

The administrative charge imposed by ACMA is calculated in accordance with the *Radiocommunications (Charges) Determination 2007*.

Licence tax

Apparatus licences issued under section 100 of the *Radiocommunications Act 1992* are subject to a licence tax based on the type of licence that is allocated.

The *Radiocommunications (Transmitter Licence Tax) Determination 2003 (No.2)* sets out how the licence tax is calculated for transmitter licences.

Licence fee exemptions and concessions

Individuals and organisations may be eligible for an exemption or concession from the payment of licence fees. For further information, see the *Licence Fee Exemptions and Concessions* guidelines on the ACMA website.

How to get more information

For more information about apparatus licences for trials of new radiocommunications technology or to submit an application, please contact:

The Australian Communications and Media Authority
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PO Box 78
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