



Spectrum Management and Telecommunications

Radio Standards Specification

Licence-Exempt Radio Apparatus: Category II Equipment

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Preface

Radio Standards Specification RSS-310, issue 6, *Licence-Exempt Radio Apparatus: Category II Equipment*, replaces RSS-310, issue 5, published in January 2020.

Listed below are the main changes:

1. removed the section on test report (already specified in RSS-Gen);
2. simplified the labelling and user manual sections by removing requirements already stated in RSS-Gen (section 4);
3. added requirements for stand-alone receivers (section 3.1);
4. added requirements for passive RFID tags, which were previously in RSS-Gen (section 3.2);
5. revised the example user manual notice for underground radios (section 3.3);
6. removed the exclusion from all ISED requirements for transmitters with input power of 6 nW or less and replaced with exemptions from the labelling, user manual, and test report requirements (section 3.6);
7. removed the exclusion from all ISED requirements for transmitters operating below 9 kHz and replaced with exemptions from the labelling, user manual, and test report requirements (section 3.7);
8. removed requirements for data modems (these are subject to [ICES-003](#) and can also be subject to [CS-03](#));
9. various editorial changes and clarifications.

Inquiries may be submitted by one of the following methods:

- 1) Online, using the [General Inquiry form](#) (in the form, select the Directorate of Regulatory Standards radio button and specify “RSS-310” in the General Inquiry field)
- 2) By mail to the following address:
Innovation, Science and Economic Development Canada
Engineering, Planning and Standards Branch
Attention: Regulatory Standards Directorate
235 Queen Street
Ottawa, Ontario K1A 0H5
Canada
- 3) By email to: consultationradiostandards-consultationnormesradio@ised-isde.gc.ca

Additional information and guidance are available on the Innovation, Science and Economic Development Canada (ISED) webpages [Common Questions and Answers](#) and [General Notices](#).

Comments and suggestions for improving this standard may be submitted online using the [Standard Change Request form](#) or by mail or email to the above addresses.

All spectrum and telecommunications related documents are available on ISED’s [Spectrum Management and Telecommunications](#) website.

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Minister of Industry

Wen Kwan
Director General
Engineering, Planning and Standards Branch

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1. Scope

This Radio Standards Specification (RSS) sets out the requirements for licence-exempt radio apparatus that is exempt from certification. The specific types of radio apparatus in scope of this standard are described in section 3.

2. General requirements

This section specifies the general requirements related to this standard.

2.1 Transition period

This standard will be in force as of the date of its publication on Innovation, Science and Economic Development Canada (ISED) [website](#).

However, a transition period is provided, ending 6 months after the publication of this standard, within which compliance with either issue 5 or issue 6 of RSS-310 is accepted. After the transition period expires, equipment manufactured, imported, distributed, leased, offered for sale, or sold in Canada shall comply with issue 6 of RSS-310.

A copy of issue 5 of RSS-310 can be requested by [email](#).

2.2 Certification

Equipment subject to this standard is classified as Category II and is exempt from certification, pursuant to subsection 21(5) of the [Radiocommunication Regulations](#), and thus no technical acceptance certificate (TAC) issued by the Certification and Engineering Bureau (CEB) of ISED or certificate issued by a recognized certification body (CB) is required.

2.3 Licensing

Equipment covered by this standard is exempt from licensing requirements pursuant to section 15 of the [Radiocommunication Regulations](#).

2.4 RSS-Gen compliance

Equipment subject to this standard shall also comply with the applicable requirements specified in RSS-Gen, [General Requirements for Compliance of Radio Apparatus](#).

3. Specific requirements

This section defines the requirements applicable to each specific type of radio apparatus subject to this standard.

3.1 Stand-alone receivers

This section applies to stand-alone receivers other than:

- a. scanner receivers subject to RSS-135, [Digital Scanner Receivers](#), and RSS-215, [Analogue Scanner Receivers](#)
- b. earth station receivers subject to licensing under CPC 2-6-01, [Procedure for the Submission of Applications for Spectrum Licences and Site Approvals for Earth Stations Requiring Site Approval](#), and CPC 2-6-03, [Procedure for the Submission of Applications for Generic Earth Station Spectrum Licences](#)
- c. those receiving radio signals from equipment subject to RBR-1, [Technical Requirements for the Operation of Mobile Stations in the Aeronautical Service](#), or RBR-2, [Technical Requirements for the Operation of Mobile Stations in the Maritime Service](#)

A stand-alone receiver is defined as any receiver that is not combined with a transmitter. The receiver part of a transceiver is not a stand-alone receiver.

Stand-alone receivers shall meet the receiver requirements specified in [RSS-Gen](#). Stand-alone receivers subject to RSS-310 are exempt from all labelling and test report requirements.

NOTE Equipment that is used, or intended to be used, to intercept and make use of, or to intercept and divulge any radiocommunications except as permitted by the originator of the communication or the person intended by the originator of the communication to receive it, is prohibited except as prescribed under section 9 of the [Radiocommunication Act](#) and may be subject to additional requirements.

3.2 Passive radio frequency identification (RFID) tags

This section applies to passive RFID tags, which do not use their own source of power for transmission, but send data by passively returning energy received from a reader's interrogating signal.

NOTE The passive RFID tag can use its own source of power for other functions, such as temperature monitoring, memory management or improving its receiving sensitivity, but it is not allowed to use its own source of power for radio transmission.

Passive RFID tags are exempt from any test report, labelling, and user manual requirements. If the reader/controller transmits in a restricted band listed in [RSS-Gen](#), the passive RFID tag is permitted to transmit back on the same frequency.

3.3 Underground radios

This section applies to radio apparatus intended to be located and operated completely below the earth surface, in locations that are not freely accessible to the public.

NOTE For example, radios exclusively intended for installation and operation inside mines.

The transmitter output power shall not exceed 110 W. At any location not defined as an underground location, the radio frequency (RF) leakage from an underground radio at its fundamental frequency shall not exceed the general field strength limits specified in [RSS-Gen](#).

In addition to the requirements specified in section 4.1, each unit of the equipment model shall bear a bilingual label stating:

For underground installations only.

Pour installations souterraines seulement.

In addition to the requirements specified in section 4.2, the user manual shall include a bilingual notice cautioning the user not to install the transmitter near any opening to above ground and shall provide instructions to comply with the requirements set out in this standard, such as the following, or equivalent:

This radio is only allowed to operate in underground locations, which are defined as locations completely below the surface of the earth that are not freely accessible to the public. Therefore, this radio apparatus is not permitted to be operated in locations such as subway stations, underground parking, underground retail and underground businesses.

Radio stations that operate exclusively in underground locations, not accessible to the public, are licence-exempt. These exempt stations operate on a secondary, no-interference, no-protection basis. Should interference be caused to any above ground radio apparatus, the operator of the underground system shall take immediate remedial action to eliminate the interference.

Although these radio systems are licence-exempt, users may consult the local district office of ISED regarding their proposed frequency selections. This would prevent the radio systems from operating on channels which can create interference with safety services and would help in the identification of systems inadvertently radiating signals above ground. Contact your local office for additional information: see RIC-66, [Addresses and Telephone Numbers of District Offices](#).

L'utilisation de cet appareil radio est permise uniquement dans des emplacements souterrains, qui sont définis comme étant des emplacements situés complètement sous la surface du sol et qui ne sont pas librement accessibles au public. En conséquence, cet appareil radio ne peut être utilisé dans des emplacements comme les stations de métro, les stationnements souterrains ou les magasins de détail et les bureaux souterrains.

Les stations radio exploitées exclusivement sous la surface du sol, qui n'est pas accessible au public, sont exemptes de licence. Ces stations sont exploitées à titre secondaire, sur une base de non-brouillage et de non-protection. Si des appareils radio de surface devaient subir du brouillage, l'exploitant du système souterrain doit prendre des mesures correctives immédiates pour éliminer le brouillage.

Bien que ces systèmes radio soient exempts de licence, les utilisateurs peuvent consulter le bureau de district local d'ISDE au sujet de leurs sélections de fréquences proposées. Ceci devrait ainsi prévenir l'exploitation de systèmes radio utilisant des canaux qui peuvent causer du brouillage aux

services de sécurité et aider à repérer les systèmes qui émettent par inadvertance des signaux au-dessus du sol. Pour obtenir de plus amples renseignements, veuillez communiquer avec votre bureau de district : voir CIR-66, [Adresses et numéros de téléphone des bureaux de district](#).

3.4 Cable-locating equipment operating within 9 to 490 kHz

Cable-locating equipment is used to locate a buried cable or pipe by coupling an RF signal onto the cable or pipe and using a receiver to detect its location. The equipment may operate on any frequency within the band 9 to 490 kHz and the power, in terms of peak value, shall not exceed 10 W for the band starting at 9 kHz and up to, but not including, 45 kHz and 1 W for the band 45 to 490 kHz.

In addition to the requirements specified in section 4.2, the user manual shall include the following or equivalent bilingual notice:

Equipment is for use by trained operators only and not for general household use. Usage duration shall be as short as possible to prevent possible radio interference to authorized services, especially the 100 kHz eLoran frequency.

L'utilisation de ce matériel est réservée exclusivement aux opérateurs formés et ne convient pas à une utilisation domestique. La durée d'utilisation doit être aussi brève que possible afin de prévenir tout brouillage possible aux services autorisés, en particulier la fréquence 100 kHz réservée au eLoran.

3.5 Alternating current (AC) wire carrier current devices operating within 0 to 30 MHz

AC wire carrier current devices operating in the band 0 to 30 MHz are intended for use inside buildings, using the building's AC wiring for RF signal propagation. The signals are generated by a transmitter/exciter unit that is electrically connected to the building wiring. This standard applies to AC wire carrier current devices of the intentional radiator type where the exciter is connected to the AC wire line but the receiver is not (e.g. a magnetic loop is used to pick up the received signal). These devices shall comply with the limits and methods of measurement prescribed in ISED's Interference-Causing Equipment Standard ICES-006, [AC Wire Carrier Current Devices \(Unintentional Radiators\)](#). Additionally, they shall comply with the provisions regarding emissions falling within the restricted bands, as specified in [RSS-Gen](#).

NOTE 1 AC wire carrier current devices that are interference-causing equipment, where both the exciter (transmitter) and the receiver are connected to the building wiring and any radiated emissions of RF energy are unintentional, are subject to [ICES-006](#). This includes in-house broadband power line devices.

NOTE 2 AC wire carrier current devices operating in the amplitude modulation (AM) broadcasting band of 535 to 1705 kHz that is intended for AM broadcast receivers are broadcasting equipment and are subject to BETS-1, [Technical Standards and Requirements for Low Power Announce Transmitters in the Frequency Bands 525–1,705 kHz and 88–107.5 MHz](#).

3.6 Transmitters with input power of 6 nW or less

Any transmitter that has a power consumption (total input power into the device) not exceeding 6 nW is exempt from the labelling, user manual, and test report requirements and may operate on any radio frequency, including in the restricted frequency bands listed in [RSS-Gen](#).

3.7 Equipment operating below 9 kHz

Radio apparatus operating at frequencies lower than 9 kHz are exempt from the labelling, user manual, and test report requirements.

3.8 Equipment operating in the band 9 to 490 kHz

Radio apparatus operating in the frequency band 9 to 490 kHz, other than cable locating equipment (see section 3.4), shall have all emissions, including the fundamental emission, at least 40 dB below the general field strength limits listed in [RSS-Gen](#).

3.9 Equipment operating in the bands 26.96 to 27.28 MHz and 49.82 to 49.90 MHz

Radio apparatus operating in the band 26.96 to 27.28 MHz or 49.82 to 49.90 MHz, or both, shall have their average field strength not exceed 10 mV/m at 3 metres distance.

Outside the operating band or bands, the general field strength limits listed in [RSS-Gen](#) shall apply.

Cordless telephones are not permitted to operate under this provision for the band 49.82 to 49.90 MHz.

4. Labelling and user manual requirements

This section specifies additional labelling and user manual requirements, in addition to those specified in [RSS-Gen](#).

4.1 Labelling

The ISED compliance label shall include the word “Canada” (or “CAN”) and a reference to this standard, for example:

Canada 310

In addition, the manufacturer or brand name and the model number shall be on the label.

The RSS-310 label is optional in case the device subject to this standard is housed together with Category I radio apparatus, as the complete product is in this case labelled in accordance with [RSS-Gen](#).

4.2 User manual

The channel frequency and the output power (or field strength level at a specified distance) shall be stated in the user manual.

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