Radiocommunications Licence Conditions (Amateur Licence) Determination No. 1 of 1997

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ACCESS CONTROL SYSTEMS (AMATEUR REPEATER STATION)

Commonwealth of Australia

Radiocommunications Act 1992

Radiocommunications Licence Conditions (Amateur Licence) Determination No. 1 of 1997

I, CHRISTINE MARY GOODE, Spectrum Manager, acting on behalf of the Spectrum Management Agency, make the following determination under paragraph 107 (1) (f) and subsection 179 (1) of the *Radiocommunications Act* 1992.

Dated 27 March

1997.

CHRISTINE M. GOODE Spectrum Manager

PART 1—PRELIMINARY

Citation

1. This Determination may be cited as Radiocommunications Licence Conditions (Amateur Licence) Determination No. 1 of 1997.

[NOTE: This Determination commences on gazettal: see *Acts Interpretation Act 1901*, ss. 46A and 48.]

Scope

- **2.** This Determination sets out conditions to which an amateur licence is subject in the following manner:
 - (a) every amateur licence is subject to the conditions in Part 2;
 - (b) every amateur licence (amateur unrestricted station) is also subject to the conditions in Part 3;
 - (c) every amateur licence (amateur limited station) is also subject to the conditions in Part 4;
 - (d) every amateur licence (amateur novice station) is also subject to the conditions in Part 5;
 - (e) every amateur licence (amateur novice limited station) is also subject to the conditions in Part 6;
 - (f) every amateur licence (amateur intermediate station) is also subject to the conditions in Part 7;
 - (g) every amateur licence (amateur beacon station) is also subject to the conditions in Part 8;

(h) every amateur licence (amateur repeater station) is also subject to the conditions in Part 9.

Interpretation

3. (1) In this Determination, unless the contrary intention appears:

"amateur licence (amateur beacon station)" means an amateur licence that authorises the holder to operate an amateur beacon station;

"amateur licence (amateur intermediate station)" means an amateur licence that authorises the holder to operate an amateur intermediate station;

"amateur licence (amateur limited station)" means an amateur licence that authorises the holder to operate an amateur limited station;

"amateur licence (amateur novice limited station)" means an amateur licence that authorises the holder to operate an amateur novice limited station;

"amateur licence (amateur novice station)" means an amateur licence that authorises the holder to operate an amateur novice station;

"amateur licence (amateur repeater station)" means an amateur licence that authorises the holder to operate an amateur repeater station;

"amateur licence (amateur unrestricted station)" means an amateur licence that authorises the holder to operate an amateur unrestricted station;

"emission mode" see Schedule 1;

[NOTE: The description of "emission mode" in Schedule 1 is based on information in Article 4 (Designation of Emission) of the Radio Regulations.]

"licence" means:

- (a) an amateur licence (amateur beacon station); or
- (b) an amateur licence (amateur intermediate station); or
- (c) an amateur licence (amateur limited station); or
- (d) an amateur licence (amateur novice limited station); or
- (e) an amateur licence (amateur novice station); or
- (f) an amateur licence (amateur repeater station); or
- (g) an amateur licence (amateur unrestricted station);

"licensee" means the holder of a licence and includes any person authorised by the licensee to operate a station under the licence;

"originating station", for an amateur repeater station, means an amateur station that transmits a signal to the amateur repeater station;

"packet mode" means a method of originating, storing and forwarding digital information transmitted by a radiocommunications device;

"public telecommunications network" means a carriage service supplied to the public;

"qualified operator", for a station, means a person who is a qualified operator for that type of station under the Radiocommunications (Qualified Operators) Determination No. 1 of 1993;

"radioteletype mode" means a method of originating or receiving digital information transmitted by a radiocommunications device;

"repeater input" means the receive frequency of an amateur repeater station that is used by other amateur stations to communicate with that station;

"repeater link" means a radiocommunication link used solely for intercommunication between 2 amateur repeater stations;

- "repeater output" means the transmit frequency that is used by an amateur repeater station to communicate with other amateur stations;
- "third party" means a person who does not hold an amateur licence;
- "wideband emission" means an emission with a necessary bandwidth that is produced by modulation techniques including, for example, fast scan television, spread spectrum techniques or pulse modulation of radio waves.

[NOTE: For the definitions of other expressions used in this Determination, see the *Radiocommunications Act 1992*, the Radiocommunications (Definitions) Determination No. 2 of 1993 and the Radiocommunications Regulations.]

(2) For this Determination, a frequency band described using 2 frequencies starts immediately above the lower frequency and ends at the higher frequency.

PART 2—CONDITIONS FOR EVERY AMATEUR LICENCE

Conditions

4. For paragraph 107 (1) (f) of the Act, every amateur licence is subject to the conditions in this Part relating to the operation of any amateur station under the licence by the licensee.

Communication by an amateur station

- **5.** (1) The licensee must not solicit a message that is to be transmitted on behalf of a third party unless the message relates to a natural disaster.
 - (2) The licensee must not transmit a message on behalf of a third party:
 - (a) enabling any person to obtain a financial gain or other reward, directly or indirectly; or
 - (b) relating to the commercial or financial affairs of any person.
- (3) The licensee must not transmit messages to an amateur station in a foreign country if the Spectrum Manager has published a notice in the *Gazette* to the effect that the government of that country has given notice that it objects to the transmission and reception of messages between amateur stations in that country and amateur stations outside that country.
- (4) A licensee must not transmit messages to an amateur station in a foreign country, on behalf of a third party, unless the government of that country has made a special arrangement with Australia for the transmission and reception of messages, on behalf of third parties, between amateur stations in Australia and amateur stations in that country.

Use of an amateur station

- **6.** The licensee:
- (a) must use an amateur station solely for the purpose of self-training, intercommunication or technical investigations into radiocommunications; and
- (b) must not use an amateur station for financial gain; and
- (c) must not transmit:
 - (i) a message that is, or includes, an advertisement; or
 - (ii) any form of entertainment.

Interference

7. The licensee must not operate an amateur station if its operation causes harmful interference to a service provided by another station.

Operation of an amateur station

- **8.** (1) If the licensee makes a single transmission from an amateur station (other than an amateur beacon station or amateur repeater station), the licensee must transmit the call sign of any station being called, or communicated with, followed by the call sign of the licensee's amateur station:
 - (a) at the beginning and end of the transmission; and
 - (b) for a transmission that lasts more than 10 minutes—at least once during each period of 10 minutes in the transmission; and
 - (c) by voice (using the English language), by visual image or by an internationally recognised code.
- (2) If the licensee makes a series of transmissions from an amateur station (other than an amateur beacon station or amateur repeater station) to a station with which communications have been established:
 - (a) the licensee must transmit the call sign of the station being called, or communicated with, followed by the call sign of the licensee's amateur station:
 - (i) at the beginning and at the end of the series of transmissions; and
 - (ii) by voice (using the English language), by visual image or by an internationally recognised code; and
 - (b) for a transmission that lasts more than 10 minutes—the licensee must transmit the call sign of the station being called or communicated with, followed by the call sign of the licensee's station:
 - (i) at least once during each period of 10 minutes in the course of the series; and
 - (ii) by voice (using the English language), by visual image or by an internationally recognised code.
- (3) The licensee must not cause a carrier wave to be emitted from an amateur station unless:
 - (a) the wave is subjected to intelligible modulation; or

- (b) the wave is emitted during a brief test or an adjustment.
- (4) The licensee must not operate an amateur station if its operation causes interference to radiocommunications services due to transmissions that:
 - (a) vary from the nominal frequency; or
 - (b) have key impact emissions as a side effect of Morse code transmission; or
 - (c) contain harmonics; or
 - (d) make other unessential emissions.
- (5) The licensee must take measures that are reasonably practicable to erect, fix, place and use an amateur station in a way that avoids interference to the efficient and convenient working of other stations.
- **(6)** If the licensee proposes to retransmit a transmission originating from another amateur station, the licensee must:
 - (a) obtain the consent of the other licensee to retransmit the transmission; and
 - (b) transmit the other licensee's call sign at the beginning and the end of each transmission; and
 - (c) indicate, as part of the transmission, that it is a retransmission of a transmission of another amateur station.

Control of equipment at an amateur station

- **9.** (1) The licensee must ensure that an amateur station is operated at all times by, or under the supervision of, a qualified operator, unless the station is:
 - (a) an amateur repeater station; or
 - (b) an amateur beacon station; or
 - (c) an amateur station using automatic mode (including, for example, packet mode and radioteletype mode); or
 - (d) an amateur station using computer controlled mode (including, for example, packet mode and radioteletype mode).
- (2) The licensee must ensure that at all times when an amateur station is operated unattended:
 - (a) a timer is fitted to the station to cause its automatic shutdown if a malfunction causes an unintentional transmission of more than 10 minutes' duration; and
 - (b) a transmission from the station can be terminated promptly if the transmission causes interference to another service.

[NOTE: For details of the classes of transmitter licences for transmitters that must be operated by qualified operators, see Radiocommunications (Qualified Operators) Determination No. 1 of 1993.]

Portable operation of an amateur station

- **10.** The licensee must not operate an amateur station at a location not mentioned in the licence for a continuous period of:
 - (a) if the station is an amateur beacon station or an amateur repeater station—more than 7 days; and
 - (b) in any other case—more than 4 months.

[NOTE: If the licensee intends to operate an amateur station at a location not mentioned in the licensee for a continuous period longer than the relevant period mentioned in section 10, the licensee should ask the SMA to change the location mentioned in the licensee to the new location by varying the licensee under section 111 of the Act.]

Restrictions on connection to a public telecommunications network

- 11. The licensee must not, directly or indirectly, connect an amateur station to a public telecommunications network if the station is:
 - (a) an amateur repeater station; or
 - (b) an amateur beacon station; or
 - (c) using automatic mode (including, for example, packet mode and radioteletype mode); or
 - (d) using computer controlled mode (including, for example, packet mode and radioteletype mode).

PART 3—CONDITIONS FOR AMATEUR LICENCE (AMATEUR UNRESTRICTED STATION)

Conditions

12. For paragraph 107 (1) (f) of the Act, every amateur licence (amateur unrestricted station) is subject to the additional conditions in this Part relating to the operation of any amateur unrestricted station under the licence by the licensee.

Permitted frequency bands

13. The licensee must operate an amateur unrestricted station to transmit only on a frequency in a frequency band mentioned in column 2 of an item in Schedule 2.

Emissions from an amateur unrestricted station

14. (1) The licensee must not operate an amateur unrestricted station in a frequency band mentioned in column 2 of an item in Schedule 2 unless it is operated using one of the emission modes mentioned in column 3 of the item.

[NOTE: Schedule 1 explains the meaning of an emission mode.]

- (2) The licensee must not operate an amateur unrestricted station, using a wideband emission, on a frequency that is more than 50.000 MHz and less than 420.000 MHz.
- (3) The licensee must not operate an amateur unrestricted station, using a wideband emission, if the operation of the station:
 - (a) causes interference to another service using the same frequency band; or
 - (b) inhibits another licensee operating an amateur station in a frequency band that starts at a frequency of at least 420.000 MHz.

Operating an amateur unrestricted station in the frequency band 50 MHz to 52 MHz

- **15.** (1) Subsections (2) and (3) apply if the licensee operates an amateur unrestricted station in the frequency band 50.000 MHz to 52.000 MHz.
- (2) The licensee must not operate the amateur unrestricted station if it causes interference to the reception of the transmissions of television channel 0.
- (3) If the licensee operates the amateur unrestricted station in New South Wales, Victoria, Queensland, Tasmania, the Australian Capital Territory or the Jervis Bay Territory the licensee must operate the station:
 - (a) in the frequency band 50.000 MHz to 50.300 MHz only, using:
 - (i) emission mode 200HA1A and a maximum transmitter power of 100 watts pY; or
 - (ii) emission mode 1K12F1D and a maximum transmitter power of 30 watts pY; or
 - (iii) emission mode 4K00J3E and a maximum transmitter power of 100 watts pX; and
 - (b) at a place that is:
 - (i) at least 120 kilometres from a television channel 0 main station; and
 - (ii) at least 60 kilometres from a television channel 0 translator station; and
 - (iii) at least 60 kilometres from a television translator station that has inputs on television channel 0.

Transmitter output power

- **16.** (1) Subject to section 15, the licensee must not operate an amateur unrestricted station, using a transmitter output power of more than 400 watts pX, if the emission mode of the station includes:
 - (a) C3F; or
 - (b) J3E; or
 - (c) R3E.
- (2) The licensee must not operate an amateur unrestricted station, with an emission mode not mentioned in subsection (1), using a transmitter output power of more than 120 watts pY.

PART 4—CONDITIONS FOR AMATEUR LICENCE (AMATEUR LIMITED STATION)

Conditions

17. For paragraph 107 (1) (f) of the Act, every amateur licence (amateur limited station) is subject to the additional conditions in this Part relating to the operation of any amateur limited station under the licence by the licensee.

Permitted frequency bands

18. The licensee must operate an amateur limited station to transmit only on a frequency in a frequency band mentioned in Schedule 3.

Emissions from an amateur limited station

- **19.** (1) The licensee must not operate an amateur limited station in the frequency band 29.000 MHz to 29.700 MHz unless it is operated using one of the following emission modes:
 - (a) 16K0F3E;
 - (b) 16K0G3E.

[NOTE: Schedule 1 explains the meaning of an emission mode.]

- (2) The licensee must not operate an amateur limited station, using a wideband emission, on a frequency that is more than 50.000 MHz and less than 420.000 MHz.
- (3) The licensee must not operate an amateur limited station, using a wideband emission, if the operation of the station:
 - (a) causes interference to another service using the same frequency band; or
 - (b) inhibits another licensee operating an amateur station in a frequency band that starts at a frequency of at least 420.000 MHz.

Operating an amateur limited station in the frequency band $50\,\mathrm{MHz}$ to $52\,\mathrm{MHz}$

- **20.** (1) Subsections (2) and (3) apply if the licensee operates an amateur limited station in the frequency band 50.000 MHz to 52.000 MHz.
- (2) The licensee must not operate the amateur limited station if it causes interference to the reception of the transmissions of television channel 0.
- (3) If the licensee operates the amateur limited station in New South Wales, Victoria, Queensland, Tasmania, the Australian Capital Territory or the Jervis Bay Territory the licensee must operate the station:
 - (a) in the frequency band 50.000 MHz to 50.300 MHz only, using:
 - (i) emission mode 200HA1A and a maximum transmitter power of 100 watts pY; or

- (ii) emission mode 1K12F1D and a maximum transmitter power of 30 watts pY; or
- (iii) emission mode 4K00J3E and a maximum transmitter power of 100 watts pX; and
- (b) at a place that is:
 - (i) at least 120 kilometres from a television channel 0 main station; and
 - (ii) at least 60 kilometres from a television channel 0 translator station; and
 - (iii) at least 60 kilometres from a television translator station that has inputs on television channel 0.

Transmitter output power

- **21.** (1) Subject to section 20, the licensee must not operate an amateur limited station, using a transmitter output power of more than 400 watts pX, if the emission mode of the station includes:
 - (a) C3F; or
 - (b) J3E; or
 - (c) R3E.
- (2) The licensee must not operate the amateur limited station, with an emission mode not mentioned in subsection (1), using a transmitter output power of more than 120 watts pY.

PART 5—CONDITIONS FOR AMATEUR LICENCE (AMATEUR NOVICE STATION)

Conditions

22. For paragraph 107 (1) (f) of the Act, every amateur licence (amateur novice station) is subject to the additional conditions in this Part relating to the operation of any amateur novice station under the licence by the licensee.

Permitted frequency bands

23. The licensee must operate an amateur novice station to transmit only on a frequency in a frequency band mentioned in column 2 of an item in Schedule 4.

Emissions from an amateur novice station

24. The licensee must not operate an amateur novice station in a frequency band mentioned in column 2 of an item in Schedule 4 unless it is operated using one of the emission modes mentioned in column 3 of the item.

[NOTE: Schedule 1 explains the meaning of an emission mode.]

Transmitter output power

- **25.** (1) The licensee must not operate an amateur novice station, using a transmitter output power of more than 100 watts pX, if the emission mode of the station includes:
 - (a) J3E; or
 - (b) R3E.
- (2) The licensee must not operate an amateur novice station, with an emission mode not mentioned in subsection (1), using a transmitter output power of more than 30 watts pY.

PART 6—CONDITIONS FOR AMATEUR LICENCE (AMATEUR NOVICE LIMITED STATION)

Conditions

26. For paragraph 107 (1) (f) of the Act, every amateur licence (amateur novice limited station) is subject to the additional conditions in this Part relating to the operation of any amateur novice limited station under the licence by the licensee.

Permitted frequency bands

27. The licensee must operate an amateur novice limited station to transmit only on a frequency in a frequency band mentioned in column 2 of an item in Schedule 5.

Emissions from an amateur novice limited station

28. The licensee must not operate an amateur novice station in a frequency band mentioned in column 2 of an item in Schedule 5 unless it is operated using one of the emission modes mentioned in column 3 of the item.

[NOTE: Schedule 1 explains the meaning of an emission mode.]

Transmitter output power

29. The licensee must not operate an amateur novice limited station using a transmitter output power of more than 30 watts pY.

PART 7—CONDITIONS FOR AMATEUR LICENCE (AMATEUR INTERMEDIATE STATION)

Conditions

30. For paragraph 107 (1) (f) of the Act, every amateur licence (amateur intermediate station) is subject to the additional conditions in this Part relating to

the operation of any amateur intermediate station under the licence by the licensee.

Permitted frequency bands

31. The licensee must operate an amateur intermediate station to transmit only on a frequency in a frequency band mentioned in column 2 of an item in Schedule 6.

Emissions from an amateur intermediate station

32. (1) The licensee must not operate an amateur intermediate station in a frequency band mentioned in column 2 of an item in Schedule 6 unless it is operated using one of the emission modes mentioned in column 3 of the item.

[NOTE: Schedule 1 explains the meaning of an emission mode.]

- (2) The licensee must not operate an amateur intermediate station, using a wideband emission, on a frequency that is more than 50.000 MHz and less than 420.000 MHz.
- (3) The licensee must not operate an amateur intermediate station, using a wideband emission, if the operation of the station:
 - (a) causes interference to another service using the same frequency band; or
 - (b) inhibits another licensee operating an amateur station in a frequency band that starts at a frequency of at least 420.000 MHz.

Operating an amateur intermediate station in the frequency band 50 MHz to 52 MHz

- **33.** (1) Subsections (2) and (3) apply if the licensee operates an amateur intermediate station in the frequency band 50.000 MHz to 52.000 MHz.
- (2) The licensee must not operate the amateur intermediate station if it causes interference to the reception of the transmissions of television channel 0.
- (3) If the licensee operates the amateur intermediate station in New South Wales, Victoria, Queensland, Tasmania, the Australian Capital Territory or the Jervis Bay Territory the licensee must operate the station:
 - (a) in the frequency band 50.000 MHz to 50.300 MHz only, using:
 - (i) emission mode 200HA1A and a maximum transmitter power of 100 watts pY; or
 - (ii) emission mode 1K12F1D and a maximum transmitter power of 30 watts pY; or
 - (iii) emission mode 4K00J3E and a maximum transmitter power of 100 watts pX; and
 - (b) at a place that is:
 - (i) at least 120 kilometres from a television channel 0 main station; and

- (ii) at least 60 kilometres from a television channel 0 translator station; and
- (iii) at least 60 kilometres from a television translator station that has inputs on television channel 0.

Transmitter output power

- **34.** (1) Subject to section 33, the licensee must not operate an amateur intermediate station, using a transmitter output power of more than 400 watts pX, if the emission mode of the station includes:
 - (a) C3F; or
 - (b) J3E; or
 - (c) R3E.
- (2) The licensee must not operate an amateur intermediate station, with an emission mode not mentioned in subsection (1), using a transmitter output power of more than 120 watts pY.

PART 8—CONDITIONS FOR AMATEUR LICENCE (AMATEUR BEACON STATION)

Conditions

35. For paragraph 107 (1) (f) of the Act, every amateur licence (amateur beacon station) is subject to the additional conditions in this Part relating to the operation of any amateur beacon station under the licence by the licensee.

Operating an amateur beacon station in the frequency band 50 MHz to 52 MHz

- **36.** (1) Subsections (2) and (3) apply if the licensee operates an amateur beacon station in the frequency band 50.000 MHz to 52.000 MHz.
- (2) The licensee must not operate the amateur beacon station if it causes interference to the reception of the transmissions of television channel 0.
- (3) If the licensee operates the amateur beacon station in New South Wales, Victoria, Queensland, Tasmania, the Australian Capital Territory or the Jervis Bay Territory the licensee must operate the station:
 - (a) in the frequency band 50.000 MHz to 50.300 MHz only, using:
 - (i) emission mode 200HA1A and a maximum transmitter power of 100 watts pY; or
 - (ii) emission mode 1K12F1D and a maximum transmitter power of 30 watts pY; or
 - (iii) emission mode 4K00J3E and a maximum transmitter power of 100 watts pX; and
 - (b) at a place that is:
 - (i) at least 120 kilometres from a television channel 0 main station; and

- (ii) at least 60 kilometres from a television channel 0 translator station; and
- (iii) at least 60 kilometres from a television translator station that has inputs on television channel 0.

[NOTE: Schedule 1 explains the meaning of an emission mode.]

Call sign

37. The licensee must operate an amateur beacon station by transmitting the call sign allocated to the licensee by the SMA at least once in each 10 minute period of operation of the station.

PART 9—CONDITIONS FOR AMATEUR LICENCE (AMATEUR REPEATER STATION)

Conditions

38. For paragraph 107 (1) (f) of the Act, every amateur licence (amateur repeater station) is subject to the additional conditions in this Part relating to the operation of any amateur repeater station under the licence by the licensee.

Operation of an amateur repeater station

- **39.** (1) The licensee must not operate an amateur repeater station unless it is operated:
 - (a) to receive signals or retransmit those signals; or
 - (b) to transmit a signal that identifies the station.
- (2) An amateur repeater station must incorporate a device that prevents the transmission of a signal in the absence of a received signal.

Repeater links

- **40.** (1) The licensee must operate a repeater link for an amateur repeater station only if:
 - (a) a signal is being retransmitted from the station to another amateur repeater station; or
 - (b) the transmission is made to identify the station.
- (2) The licensee must operate a repeater link for an amateur repeater station by transmitting the call sign allocated to the station by the SMA at least once in each period of 10 minutes of operation of the repeater link.

Transmission on authorised frequency bands

41. The licensee must not operate an amateur repeater station to transmit a signal to another amateur station if the originating station is not authorised under its licence to use the repeater output of the amateur repeater station.

Access control system

- **42.** (1) The licensee must operate an amateur repeater station using an access control system described in subsection (3) if:
 - (a) an originating station transmits a signal to the amateur repeater station; and
 - (b) the amateur repeater station uses a repeater output that:
 - (i) is not on the same frequency as the amateur repeater station's repeater input; and
 - (ii) is on a frequency on which the originating station is not permitted to transmit a signal.
- (2) The licensee must operate an amateur repeater station using an access control system described in subsection (3) if:
 - (a) an amateur repeater station transmits a signal to that amateur repeater station; and
 - (b) the 2 amateur repeater stations are linked; and
 - (c) the amateur repeater station to which the signal is transmitted uses a repeater output on a frequency on which the originating station is not permitted to transmit a signal.
 - (3) An access control system must:
 - (a) be 1 of the following systems:
 - (i) a tone burst system that has a frequency of 1750 Hz;
 - (ii) a continuous tone coded squelch system that uses the frequencies set out in Part 1 of Schedule 7;
 - (iii) a dual tone multi frequency system that uses the frequencies set out for digits in Part 2 of Schedule 7; and
 - (b) prevent transmission by the amateur station on the repeater output when access control signals corresponding to a system referred to in paragraph (a) are not received.

Operating an amateur repeater station in the frequency band 50 MHz to 52 MHz

- **43. (1)** Subsections (2) and (3) apply if the licensee operates an amateur repeater station in the frequency band 50.000 MHz to 52.000 MHz.
- (2) The licensee must not operate the amateur repeater station if it causes interference to the reception of the transmissions of television channel 0.
- (3) If the licensee operates the amateur repeater station in New South Wales, Victoria, Queensland, Tasmania, the Australian Capital Territory or the Jervis Bay Territory the licensee must operate the station:
 - (a) in the frequency band 50.000 MHz to 50.300 MHz only, using:
 - (i) emission mode 200HA1A and a maximum transmitter power of 100 watts pY; or
 - (ii) emission mode 1K12F1D and a maximum transmitter power of 30 watts pY; or

- (iii) emission mode 4K00J3E and a maximum transmitter power of 100 watts pX; and
- (b) at a place that is:
 - (i) at least 120 kilometres from a television channel 0 main station; and
 - (ii) at least 60 kilometres from a television channel 0 translator station; and
 - (iii) at least 60 kilometres from a television translator station that has inputs on television channel 0.

[NOTE: Schedule 1 explains the meaning of an emission mode.]

Call sign

44. The licensee must operate an amateur repeater station by transmitting the call sign allocated to the station by the SMA at least once in each period of 10 minutes of operation of the station.

PART 10—REVOCATION OF TECHNICAL LICENCE SPECIFICATIONS

Revocation

- **45.** The following Determinations are revoked:
- (a) TLS 5/1995 Amateur (unrestricted), notified in the *Gazette* on 5 July 1995;
- (b) TLS 6/1995 Amateur (limited), notified in the *Gazette* on 5 July 1995;
- (c) TLS 7/1995 Amateur (novice), notified in the *Gazette* on 5 July 1995;
- (d) TLS 8/1995 Amateur (novice limited), notified in the *Gazette* on 5 July 1995;
- (e) TLS 9/1995 Amateur (intermediate), notified in the *Gazette* on 5 July 1995.

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Section 3

EMISSION MODES

- 1. For this Determination, the emission mode of a transmission of an amateur station is set out in a series of numbers and letters representing (in order) the following components:
 - (a) the necessary bandwidth of the transmission;
 - (b) the modulation of the main carrier of the transmission;
 - (c) the nature of the signal or signals modulating the main carrier of the transmission;
 - (d) the kind of information to be transmitted using the station.
- 2. The symbols used to describe each component of the emission mode are:

Component	Description	Symbol
Necessary bandwidth	Necessary bandwidth is a value between 0.001 Hz and 999.999 Hz (inclusive)	Н
	Necessary bandwidth is a value between 1.000 kHz and 999.999 kHz (inclusive)	K
[NOTE: 200 Hz would	be represented as 200H and 4 kHz would be represented	d as 4K00.]
Modulation of the main carrier	Main carrier: (a) is amplitude modulated; and(b) uses double-sideband	A
	Main carrier: (a) is amplitude modulated; and(b) uses single-sideband, full carrier	Н
	Main carrier:(a) is amplitude modulated; and(b) uses a single-sideband, reduced or variable-level carrier	R
	Main carrier: (a) is amplitude modulated; and(b) uses a single-sideband, suppressed carrier	J
	Main carrier: (a) is amplitude modulated; and(b) uses independent sideband	В

SCHEDULE 1—continued

Component	Description	Symbol
Modulation of the main carrier (continued)	Main carrier: (a) is amplitude modulated; and (b) uses vestigial sideband	С
	Main carrier: (a) is angle modulated; and(b) uses frequency modulation	F
	Main carrier: (a) is angle modulated; and(b) uses phase modulation	G
Signal or signals modulating the main carrier Signal modulating the main carrier is a single channel containing quantized or digital information without the use of a modulating subcarrier Signal modulating the main carrier is a		1
	Signal modulating the main carrier is a single channel containing quantized or digital information with the use of a modulating subcarrier	2
	Signal modulating the main carrier is a single channel containing analog information	3
	Signal modulating the main carrier is 2 or more channels containing analog information	8
Kind of	Telegraphy for aural reception	A
information to be transmitted	Telegraphy for automatic reception	В
	Facsimile transmission	C
	Data transmission, telemetry or telecommand	D
	Telephony	E
	Television (video)	F
	A combination of any of the kinds of information described in the previous items	W

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Sections 13 and 14

PERMITTED FREQUENCIES AND EMISSION MODES (AMATEUR UNRESTRICTED STATION)

Column 1	Column 2	Column 3	
Item no.	Frequency band	Permitted em	nission modes
1	1.800 MHz-1.875 MHz 3.500 MHz-3.700 MHz 3.794 MHz-3.800 MHz 7.000 MHz-7.300 MHz 10.100 MHz-10.150 MHz 14.000 MHz-14.350 MHz 18.068 MHz-18.168 MHz 21.000 MHz-21.450 MHz 24.890 MHz-24.990 MHz	200HA1A 200HA1B 1K12F1A 1K12F1B 1K12F1D 1K12G1B 1K12G1D 1K12J2D 2K00H3E 2K00J3E 2K00J3E 3K00J3C 3K00J3C 3K00J3C 3K00J3F 3K00R3C 4K00A3E 4K00H3E 4K00H3E 4K00H3E	6K00A2B 6K00A2D 6K00A3C 6K00A3F 6K00F2A 6K00F2B 6K00F3C 6K00F3E 6K00F3F 6K00G2A 6K00G2B 6K00G2D 6K00G3C 6K00G3E 6K00G3F 8K00A8E 8K00B3E 8K00B8W
2	28.000 MHz-29.700 MHz	Emission modes mentioned in column 3 of item 1 16K0F3E 16K0G3E	
3	50.000 MHz-54.000 MHz 144.000 MHz-148.000 MHz	Any emission mode except an emission mode that includes a wideband emission	

SCHEDULE 2—continued

Column 1	Column 2	Column 3
Item no.	Frequency band	Permitted emission modes
4	420.000 MHz-450.000 MHz 1240.000 MHz-1300.000 MHz 2300.000 MHz-2450.000 MHz 3.300 GHz-3.600 GHz 5.650 GHz-5.850 GHz 10.000 GHz-10.500 GHz 24.000 GHz-24.250 GHz 47.000 GHz-47.200 GHz 75.500 GHz-81.000 GHz 119.980 GHz-120.020 GHz 142.000 GHz-149.000 GHz	Any emission mode
	241.000 GHz-250.000 GHz	

Section 18

PERMITTED FREQUENCIES (AMATEUR LIMITED STATION)

Frequency band

29.000 MHz-29.700 MHz

50.000 MHz-54.000 MHz

144.000 MHz-148.000 MHz

420.000 MHz-450.000 MHz

1240.000 MHz-1300.000 MHz

2300.000 MHz-2400.000 MHz

2400.000 MHz-2450.000 MHz

3.300 GHz-3.600 GHz

5.650 GHz-5.850 GHz

10.000 GHz-10.500 GHz

24.000 GHz-24.250 GHz

47.000 GHz-47.200 GHz

75.500 GHz-81.000 GHz

119.980 GHz-120.020 GHz

142.000 GHz-149.000 GHz

241.000 GHz-250.000 GHz

SCHEDULE 4

Sections 23 and 24

PERMITTED FREQUENCIES AND EMISSION MODES (AMATEUR NOVICE STATION)

Column 1	Column 2	Colu	mn 3
Item no.	Frequency band	Permitted em	nission modes
1	3.525 MHz-3.625 MHz 28.100 MHz-28.600 MHz	200HA1A 4K00H3E 4K00J3E 4K00R3E 8K00A3E 8K00B8E	1K12FIA 1K12F1B 1K12F1D 1K12G1B 1K12G1D 1K12J2D
2	21.125 MHz-21.300 MHz	200HA1A 4K00H3E 4K00J3E	4K00R3E 8K00A3E 8K00B8E
3	144.692 MHz-145.208 MHz	1K12FIB 1K12G1B 1K12G1D 16K0F2B	16K0F2D 16K0G2B 16K0G2D
4	146.000 MHz-148.000 MHz 433.000 MHz-435.000 MHz 438.000 MHz-440.000 MHz	1K12FIB 1K12F1D 1K12G1B 1K12G1D 16K0F1B	16K0F1D 16K0F3E 16K0G1B 16K0G1D 16K0G3E

Sections 27 and 28

PERMITTED FREQUENCIES AND EMISSION MODES (AMATEUR NOVICE LIMITED STATION)

Column 1	Column 2	Column 3	
Item no.	Frequency band	Permitted emission modes	
1	144.692 MHz-145.208 MHz	1K12FIB	16K0F2B
		1K12F1D	16K0F2D
		1K12G1B	16K0G2B
		1K12G1D	16K0G2D
2	146.000 MHz-148.000 MHz	1K12FIB	16K0F2D
	433.000 MHz-435.000 MHz	1K12F1D	16K0F3E
	438.000 MHz-440.000 MHz	1K12G1B	16K0G2B
	438.000 WITZ-440.000 WITZ	1K12G1D	16K0G2D
		16K0F2B	16K0G3E

Sections 31 and 32

PERMITTED FREQUENCIES AND EMISSION MODES (AMATEUR INTERMEDIATE STATION)

Column 1	Column 2	Column 3	
Item no.	Frequency band	Permitted em	ission modes
1	3.500 MHz-3.700 MHz 21.000 MHz-21.450 MHz 28.000 MHz-29.000 MHz	200HA1A 200HA1B 1K12F1A 1K12F1B 1K12F1D 1K12G1B 1K12G1D 1K12J2D 2K00H3E 2K00J3E 2K00J3E 3K00H3C 3K00J3C 3K00J3C 3K00J3F 3K00R3C 4K00A3E 4K00H3E	6K00A2B 6K00A2D 6K00A3C 6K00A3F 6K00F2A 6K00F2B 6K00F3C 6K00F3E 6K00F3F 6K00G2A 6K00G2B 6K00G2D 6K00G3C 6K00G3E 6K00G3F 8K00A8E
2	28.000 MHz-29.700 MHz	4K00J3E 4K00R3E 6K00A2A Emission mod column 3 of in 16K0F3E	8K00B3E 8K00B8W des mentioned in tem 1
3	50.000 MHz-54.000 MHz 144.000 MHz-148.000 MHz	16K0G3E Any emission mode except an emission mode that includes a wideband emission	

SCHEDULE 6—continued

Column 1	Column 2	Column 3
Item no.	Frequency band	Permitted emission modes
4	420.000 MHz-450.000 MHz 1240.000 MHz-1300.000 MHz 2300.000 MHz-2450.000 MHz 3.300 GHz-3.600 GHz 5.6500 GHz-5.850 GHz 10.000 GHz-10.500 GHz 24.000 GHz-24.250 GHz 47.000 GHz-47.200 GHz 75.500 GHz-81.000 GHz 119.980 GHz-120.002 GHz	Any emission mode
	142.000 GHz-149.000 GHz 241.000 GHz-250.000 GHz	
	47.000 GHz-47.200 GHz 75.500 GHz-81.000 GHz 119.980 GHz-120.002 GHz 142.000 GHz-149.000 GHz	

Subsection 42 (3)

ACCESS CONTROL SYSTEMS (AMATEUR REPEATER STATION)

PART 1—CONTINUOUS TONE CODED SQUELCH SYSTEM

67.0 Hz	79.7 Hz	94.8 Hz	114.8 Hz	141.3 Hz	167.9 Hz
69.0 Hz	82.5 Hz	100.0 Hz	118.8 Hz	146.2 Hz	173.8 Hz
71.9 Hz	85.4 Hz	103.5 Hz	123.0 Hz	151.2 Hz	179.9 Hz
74.4 Hz	88.5 Hz	107.2 Hz	131.8 Hz	156.7 Hz	186.2 Hz
77.0 Hz	91.5 Hz	110.9 Hz	136.5 Hz	162.2 Hz	192.8 Hz

PART 2—DUAL TONE MULTI FREQUENCY

			Digit	
	697	1	2	3
Low	770	4	5	6
Tone (Hz)	852	7	8	9
	942	*	0	#
High To	one (Hz)	1209	1336	1477

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