

# Government Gazette Staatskoerant

REPUBLIC OF SOUTH AFRICA  
REPUBLIEK VAN SUID-AFRIKA

*Regulation Gazette*

**No. 8149**

*Regulasiekoerant*

**Vol. 476**

**Pretoria, 4 February 2005**  
**Februarie**

**No. 27258**

---

**CONTENTS • INHOUD**

*No.*

*Page  
No.    Gazette  
      No.*

**GOVERNMENT NOTICE**

**Communications, Department of**

*Government Notice*

108 Telecommunications Act (103/1996): Amendment of Chapters 1, 3 and 4 of the Radio Regulations..... 3 27258

---

---

**GOVERNMENT NOTICE**

---

No. 108

4 February 2005

**DEPARTMENT OF COMMUNICATIONS  
TELECOMMUNICATIONS ACT, 1996 (ACT NO. 103 OF 1996)  
AS AMENDED****AMENDMENT OF CHAPTERS 1, 3 AND 4 OF RADIO  
REGULATIONS**

I, Dr. Ivy Matsepe-Casaburri, Minister of Communications, hereby In terms of Section 95 (3) of the Telecommunications Act, 1996 (Act No. 103 of 1996), approve and publish the regulations in the Schedule made by the Independent Communications Authority of South Africa in terms of section 95(1) of the said Act.



Dr. Ivy Matsepe-Casaburri  
Minister of Communications

## SCHEDULE

### DEFINITIONS

1. In this Schedule the "Regulations" mean the Radio Regulations published by Government Notice No. R. 2862 of 28 December 1979 as amended.

### AMENDMENT OF CHAPTER 1

2. Chapter 1 of the Regulations is hereby amended by -

(a) the substitution for the paragraph preceding the definitions of the following paragraph:

"Any expression to which a meaning is assigned in the Act has the same meaning in these regulations and, unless the context otherwise indicates-

(b) the insertions of the following definitions in their correct alphabetic order:

*"Antenna port"* means the last point preceding the feed line to the antenna;

*'breakthrough'* means a disturbance to the normal operation of a radio or television receiving apparatus or other electronic or telecommunications apparatus as a result of the presence of strong electromagnetic fields generated by a transmitter;

'*call sign*' means the allocation of identification letters and numbers as per ITU Radio regulations article 19;

'*CEPT*' means the Conference of European Posts and Telecommunications authorities;

"*HAREC*' means a Harmonised Amateur Radio Examination Certificate issued in terms of CEPT recommendation TR61-02E;"

- (c) the substitution for the definition '*licencee*' of the following definition:

" '*licencee*' means the person to whom a licence has been issued in terms of section 30 of the Act", and

- (d) the substitution for the definition of '*the Act*' of the following definition:

" '*the Act*' means the Telecommunications Act, 1996 (Act No. 103 of 1996)"

## **SUBSTITUTION OF CHAPTER 3**

3. The Regulations are hereby amended by the substitution for chapter 3 of the following chapter.

### **CHAPTER 3**

#### **AMATEUR RADIO STATIONS**

#### **B1 CONDITIONS FOR ISSUING OF AMATEUR RADIO STATION LICENCE**

- (1) The Authority shall issue call signs to licenced radio stations and no other body shall acquire call signs on behalf of a group of persons or amateur radio stations
- (2) The Authority may, subject to these regulations and the conditions set out in this Chapter, issue a Class A1, Class A2 or Class B Licence for the use of an amateur radio station.
- (3) Class A1 unrestricted Licence may be issued to a person who -
  - (a) has furnished proof of his or her ability to correctly set up, adjust and operate an amateur HF transceiver; and
  - (b) is in possession of a HAREC issued or recognised by the Authority; and

- (c) is in possession of a certificate issued by the national body approved by the Minister attesting that he or she has satisfactorily completed an assessment or criteria prescribed by the national body for this purpose that demonstrates advanced knowledge of theoretical or practical aspects of amateur radio.
- (4) Class A2 (restricted) Licence (ZR - CEPT Class 2) may be issued to a person who –
- (a) has furnished proof of his or her ability to correctly set up, adjust and operate an amateur HF transceiver; and
- (b) is in possession of a HAREC issued by the Authority.
- (5) Class B licence (ZU) may be issued to a person who -
- (a) has furnished proof of his or her ability to correctly set up, adjust and operate an amateur HF transceiver; and
- (b) is in possession of a certificate specified for a Class B licence.
- (6) The Authority may issue an amateur radio station licence to a person who is in possession of a valid foreign amateur radio licence or amateur radio operators certificate, equivalent to the relevant class of South African licence

or certificate, issued by a recognised competent foreign authority and where there is a reciprocal international agreement between the Republic of South Africa and the other country.

(7) For the purposes of this regulation, "a person" shall mean a natural person and shall not include an association, company or other legal person: Provided that an amateur radio station licence may be issued to a licenced radio amateur in good faith, on behalf of an amateur radio association.

## **B2 USE OF AMATEUR RADIO STATIONS**

(1) An amateur radio station shall only be used by the holder of the amateur radio station licence issued by the Authority, provided that someone who holds an amateur radio operator certificate or HAREC issued in terms of the Act may be permitted by the holder of an amateur radio station licence to make transmissions over the amateur radio station under the supervision of the licensee on condition that such transmissions shall take place only for short periods and for the sole purpose of training.

(2) The holder of an amateur radio station licence may use an amateur radio station other than his or her own with the permission of the licensee concerned.

(3) An amateur radio listener's licence authorises the holder thereof to acquire and be in possession of radio apparatus for the reception of amateur radio signals only.



### **B3 COMMUNICATION BY AMATEUR RADIO STATIONS**

- (1) The licensee is permitted –
  - (a) to engage in communication with other licenced amateur stations, using the permitted amateur bands, and such communications shall be restricted to comments on technical investigations, remarks of a personal nature and other items of a common interest; which shall not include commercial or business communications for which the public telecommunication service would have been used had the amateur communications not be available
  - (b) in the case of an emergency and where the safety of life or limb is at stake, to communicate with any other stations, using the amateur bands and other bands outside the amateur allocation to prevent loss of life, render assistance, call for assistance or convey health and welfare messages directly connected with the emergency,
  - (c) to practice emergency and event related communications, by providing communications for cycle, motor, marathon rallies and general community service, especially in times of national interest: Provided that the station engaged in the practise, be

registered with the *national body approved by the Minister* in the Republic of South Africa, and be a holder of the appropriate class licence, for the frequency used;

- (d) to carry out communications in plain language or Q Code;
- (e) to send signals unenciphered that form part of or relate to the transmission of messages (e.g. Identification Tones).

(2) An amateur radio station shall not transmit political, derogatory, racist, sexual, irreligious, improper, blasphemous, insulting, obscene or threatening remarks.

(3) An amateur radio station shall not advertise any goods, services or anything else, or transmit any news or messages on behalf of a third person: Provided that the Authority may authorise a Licencee to transmit-

- (a) reports on behalf of or by a third person during events that are in the opinion of the Authority in the public interest;
- (b) information bulletins that are of direct interest to amateurs; and
- (c) Morse Code for reception by persons learning Morse Code operation or for improving their competence in Morse code.

(4) For the purposes of this regulation, messages and signals include communication by any of the modes or types of modulation permitted in regulation B5.

(5) Appointed and licenced amateur radio stations in the Republic of South Africa are permitted to broadcast news bulletins and programs of general interest which are of a general nature to further the amateur radio service, radio science and electronics generally.

(6) The Authority may allow stations registered as educational stations to demonstrate amateur radio to persons who do not hold an amateur radio licence by allowing them to speak and operate the station under the supervision of a licenced amateur participating in a special educational event or at educational institutions.

#### **B4 LOG BOOK WITH REGARD TO AMATEUR RADIO STATION ACTIVITIES**

(1) The licensee shall keep a log book recording the activities of the amateur radio station used by him or her or any other person under supervision of the licensee, Except when operating a station in the VHF and UHF bands.

(2) Details recorded in the log book referred to in sub-regulation (1) shall include -

- (a) the date, time and nature of each transmission. The date with regard to each individual day's operations need be recorded only once and for the purposes of this paragraph "time of each transmission" shall mean the time that a specific station is called and the time at which the communication with such station is terminated;
- (b) the full name and address of the person making the transmission: Provided that the name of the licensee who regularly uses the amateur radio station need be recorded only once in the log book together with an explicit statement that all transmissions are made by him except where stated otherwise;
- (c) the call sign of every station: Provided that it need not be recorded repeatedly for calls made to the same station during the course of the communication;
- (d) the transmit power that is used;
- (e) the frequency band that is used: Provided that it need be recorded in the log book only once until a change of frequency to another authorised band takes place; and

- (f) the address from where the transmission takes place: Provided that such address need be recorded only once should the place of transmission not change.

## **B5 TERMS AND CONDITIONS FOR AMATEUR LICENCES (A1, A2, B)**

- (1) Subject to the conditions set out in subregulation (2) no person shall transmit over amateur radio stations at frequencies, using modes of emission or at power levels other than those indicated in Annexure G, unless by special permission of the Authority.
- (2)
- (a) The bandwidth of F3E and G3E emission shall be restricted to 10 kHz in bands under 50 MHz.
- (b) The bandwidth for 625-line television transmissions (C3F) shall not exceed 6 MHz at frequencies above 1 GHz
- (c) Bands where the amateur service allocation is on a secondary basis are shared with other services and amateur radio stations shall avoid interference with these services. Additionally, users of these bands shall unconditionally accept interference from industrial, scientific and medical (ISM) equipment

- (d) The bandwidth of all emissions shall be restricted to a maximum of 25 kHz in the bands 50 - 430 MHz with the exception of W9E emissions in the band 430-440 MHz.
  - (e) For W9E emissions a maximum of 12 channels may be multiplexed and the bandwidth shall not exceed 25 kHz per channel in the band 430 - 440 MHz
  - (f) The bandwidth of all emissions shall not exceed 10 per cent of the band concerned when operating above 1 GHz
  - (g) 430 - 440 MHz band. For digital repeater inter-linking at 9 600 baud the frequencies of 438,650 - 439,100 MHz may be used.
  - (h) On frequency bands above 1 GHz, since high intensities of RF radiation may be harmful, and in locations to which people may have access, the power flux densities on transmit must not exceed the limits recommended by competent authorities from time to time.
  - (i) The bandwidth of J2D and J2E transmissions shall not exceed 3 KHz in bands under 30 MHz.
- (3) Modes of emission as referred to in sub-regulation (2) are as specified in Table 1.

TABLE 1

No	Mode	Explanation
1.	A1A	Telegraphy without the use of a modulating audio frequency (by on/off keying) for aural reception.
2.	A3C	Facsimile (with modulation of the main carrier either directly or by frequency-modulated sub-carrier.
3.	A3E	Double sideband, telephony
4.	C3F	Television by analogue modulation and vestigial-sideband operation.
5.	F1A	Telegraphy for aural reception including RTTY and DATA by means of frequency-shift keying without the use of a modulating audio frequency, one or two frequencies being emitted at any instant.
6.	F1B	Telegraphy including RTTY and DATA by means of frequency-shift keying without the use of a modulating audio frequency, one or two frequencies being emitted at any instant.
7.	F1D	Data transmissions by means of frequency-shift keying without the use of a modulating audio frequency, with one frequency being emitted at any instant
8.	F2A	Telegraphy for aural reception including RTTY and DATA by the on/off keying of a frequency or by means of the on/off keying of a frequency-modulated emission.
9.	F2B	Telegraphy including RTTY and DATA by the on/off keying of a frequency-modulating audio frequency or by means of the on/off keying of a frequency-modulated emission
10.	F3C	Facsimile by direct frequency modulation of the carrier.
11.	F3E	Frequency-modulated telephony
12.	G3E	Phase-modulated telephony
13.	J3E	Single sideband, suppressed carrier, telephony.
14.	J3F	Single sideband, suppressed carrier, modulated by slow scan television audio frequencies.
15.	NON	Emission of an un-modulated carrier.
16.	R3E	Single sideband, reduced or variable-level carrier, telephony.
17.	W9E	Digital speech multiplexed up to 12 channels.
18.	J2D	Data transmission with the use of a modulating audio frequency.
19.	J2E	Digital telephony with the use of a modulating audio frequency.

(4) Except as provided for in regulation B3(1)(b) above, the transmit apparatus used at an amateur radio station shall under no circumstances or at no time be tuned to a frequency other than those referred to in Annexure G.

(5) The required frequencies shall be selected and maintained such that, no appreciable energy shall be radiated at frequencies other than those, referred to in Annexure G: Provided that the bandwidth of emissions on bands that have been allocated to the amateur radio service in terms of these regulations shall be restricted to the minimum.

## ***B6 LIMITATIONS IN RESPECT OF CLASS B LICENCEES***

- (1) A Class B licensee may not use an amateur radio station for the transmission of any form of entertainment: Provided that music transmissions, television transmissions and spread-spectrum communications may be permitted for experimental or tuition purposes under the supervision of the holder of a Class A1 or A2 licence and in accordance with the requirements of regulations B7, B8 and B9 respectively.
- (2) No person may operate an amateur radio station using frequency bands, modes of emission or at maximum power levels other than those specified for Class B licence holders in regulation B5 (2)

## ***B7 MUSIC TRANSMISSIONS***

No form of entertainment shall be transmitted from an amateur radio station: Provided that music transmissions for experimental purposes shall be permissible on condition that-



- (a) such transmissions shall last no longer than three minutes;
- (b) at least five minutes shall elapse before any further music is transmitted from the same station.
- (c) when commercial recordings are used the make, name or title of such recordings shall not be mentioned; and
- (d) such transmissions shall not take place in bands other than the following:
  - (i) 3 500 - 3 800 kHz
  - (ii) 50 - 54 MHz
  - (iii) 144 - 146 MHz
  - (iv) 430 - 440 MHz
  - (v) 1 240 - 1 300 MHz

### **B8 TELEVISION TRANSMISSIONS**

- (1) The Authority may subject to such conditions as it may, in each case lay down, authorise the holder of an amateur radio station licence to transmit television, Provided that such approval shall only be granted to the licensee after at least 12 months have elapsed since the date of issue of such licence.
- (2) In the case of television transmissions the station call sign shall also be given in hand-speed Morse Code or radiotelephony at the beginning and end of each transmission and at least once every 15 minutes in the stipulated manner in the case of long transmissions.

### **B9 SPREAD-SPECTRUM COMMUNICATIONS**

(1) The Authority may, subject to the condition that interference is not caused to other users of the same frequency band and such other conditions as it may deem necessary, on application, authorise the holder of an amateur radio station licence to employ spread-spectrum communications.

(2) The frequency (band edges) and the modulation technique/emission designation to be used shall be furnished in the application referred to in sub-regulation (1)

### **B10 TELEPRINTER WORKING**

(1) Teleprinter operation with call-sign identification in teleprinter code between amateur radio stations is permissible without prior approval of the Authority: Provided that the maximum operating speed shall be restricted to a maximum of 300 baud in the HF bands and to 9600 baud in the bands above 50 MHz.

(2) In the case of teleprinter operation the call sign identification in teleprinter code shall be given at the beginning and end of each transmission and at least once every 15 minutes in the case of long transmissions.

### **B11 RESTRICTIONS WITH REGARD TO TRANSMISSIONS BY AN AMATEUR RADIO STATION**

(1) An amateur station may not transmit damped wave emissions.

(2) An amateur or experimental radio station shall not be used for the simultaneous retransmission, by automatic or other means of programs or signals originating from commercial radio station: Provided that the holder of an amateur radio station licence or experimental station licence may relay legal signals by automatic or other means that originate from a licenced amateur or experimental radio station.

(3) An amateur radio station shall not be erected for use from a public vehicle.

### ***B12 TRANSMITTER POWER OUTPUT OF AMATEUR RADIO STATIONS***

(1) The maximum *power* output of the transmitter, as measured at the antenna port, shall not exceed the levels specified in the schedule to regulation B5 (1) for the relevant licence classes and linearity shall be maintained.

(2) An adequately filtered direct-current power supply shall be used for all the transmitting equipment.

- (3) (a) The coupling between the antenna and the transmitter shall be such that no direct potential danger to life exists at a power supply frequency on or at the antenna.
- (b) The antenna system shall furthermore comply with the requirements of the relevant local authority.

### **B13 FREQUENCY MEASURING EQUIPMENT**

Every amateur or experimental radio station shall have frequency measuring equipment with an accuracy of at least 0,1 per cent unless the frequencies of all transmitters of the station are crystal controlled and are accurate to at least 0,1 per cent.

### **B14 MOBILE AMATEUR RADIO STATION**

- (1) An amateur holding a Class A1, A2 or B licence may use a mobile amateur radio station within the boundaries of the Republic.
  
- (2) When a mobile amateur station is used in an amateur radio zone other than that in which the amateur resides, the call sign allocated to the main station shall-
  - (a) in the case of continuous-wave radiotelegraphy, be followed by the signal *-..-*, the letter M and the number of the zone from where the station is operated; and
  
  - (b) in the case of radiotelephony be followed by the word "mobile", followed by the number of the zone from where the station is operated.

(3) For the application of the provisions of sub regulation (2) in respect of zones the different zones of the Republic of South Africa are indicated in Annexure F of the Regulations.

***B15 ISSUING, SUSPENSION AND CANCELLATION OF  
AMATEUR RADIO OPERATOR CERTIFICATE & LICENCE***

- (1) The Authority shall appoint an examining national body that shall issue HAREC on behalf of the Authority.
- (2) If the examining body decides not to accept the candidate or issue the certificate, the examining body must refer the application to the Authority for a final decision.
- (3) The Authority may, by written notice given to a licenced operator, cancel the operator's HAREC and provide reasons therefore.
- (4) The Authority must in deciding whether to cancel the certificate have regard to;
  - (a) any matters to which the Authority must have regard in deciding whether to issue an amateur radio licence;
  - (b) whether the operator has been convicted of an offence in terms of the Act and
  - (c) whether the operator has been convicted of a criminal offence that relates to the Act and other instruments that regulate State security.
- (5) The Authority may, by written notice given to the Licencee, cancel the apparatus licence and provide reasons therefore.

(6) The notice must give the reasons for cancelling the licence.

### **B16 AMATEUR RADIO OPERATOR CERTIFICATES**

(1) No person shall obtain a HAREC or a certificate specified for a Class B licence unless he or she has passed an examination in the Republic of South Africa, as authorised by the Authority on the syllabuses approved by it for Class A1, A2 or Class B licences.

(2) Any person permitted by the Authority may sit for the examination on payment of the fee in respect of the applicable certificate referred to in regulation B1.

(3) The examination shall be conducted at least once a year at centres indicated by *the national body* in the Republic of South Africa as authorised by the Authority.

(4) HAREC's and certificates specified for Class B licences shall be issued to candidates who pass the examination and such certificates are not recognised for any purpose other than the issuing of an amateur radio station licence.

(5) The possession of a HAREC or certificate specified for Class B licences shall not entitle the holder thereof to with any right to an amateur radio station licence

(6) The holder of a HAREC or certificate specified for Class B licences whose licence has expired shall comply with the applicable provisions of regulation B1 before an application from him or her for a new licence will be considered.

(7) (a) The syllabuses for the examination referred to in sub-regulation (1) are obtainable from the Authority.

(b) Three hours shall be allowed for the examination paper consisting of various parts.

(c) To pass the examination, a candidate must obtain at least 50 per cent in each of the relevant parts with a total average of 65 per cent.

(d) A candidate who passes either of the parts referred to above and passes the remaining part within three successive attempts, which must commence with the examination immediately after the one in which a candidate was unsuccessful with a percentage which gives him an average of at least 50 percent shall be exempted from writing the whole examination again.

**AMENDMENT OF CHAPTER 4**

4. Chapter 4 of the Regulations is hereby amended by-

- (a) the substitution for the heading to Chapter 4 of the Regulations of the following heading:

“SUPER HIGH FREQUENCY (SHF), ULTRA HIGH FREQUENCY (UHF), VERY HIGH FREQUENCY (VHF), HIGH FREQUENCY (HF) AND VERY SHORT-RANGE (VSRB) STATIONS IN LAND AND MARITIME MOBILE AND AMATEUR RADIO SERVICES”; and

- (b) the addition in regulation C1 of the following sub-regulations after sub regulation (4);

“(5) 235 - 470 MHz

Transmitters with a mean power output exceeding 25W may not exceed 1mW or 0dBm (mW)

(6) 470 MHz -250 GHz



- (a) Transmitters with a mean power output not exceeding 25W may not exceed 25  $\mu$ W or -16 dBm (mW)
  
- (b) Transmitters with a mean power output exceeding 25W may not exceed 1mW or 0dBm (mW).

## **ADDITION OF ANNEXURE G**

5. The Regulations are hereby amended by the addition of the following annexure after Annexure F of the Regulations:

## ANNEXURE G

Frequency bands in MHz	The Amateur Service	Maximum Power (in dB relative to 1 watt) PEP	Satellite	Permitted types of transmission	(a) Remarks
1.810 – 1.850	Primary	A1 = 26 dBW A2 = 20 dBW		All except pulse or fast scan tv	No Class B operation
3.500 – 3.800	Co-primary	A1 = 26 dBW A2 = 20 dBW B = 13 dBW		All except pulse or fast scan tv	
7.000 – 7.100	Primary.	A1 = 26 dBW A2 = 20 dBW B = 13 dBW	Allocated	All except pulse or fast scan tv	
10.100 - 10.150	Secondary	A1 = 26 dBW		All except pulse or fast scan tv	No Class A2 or Class B operation International Band
14.000 - 14.350 14.070-14.099 14.225 - 14.250	Primary	A1 = 26 dBW A2 = 20 dBW A2 = 20 dBW	Allocated	All except pulse or fast scan tv	No Class B Operation International Band
18.068 - 18.168	Primary	A1 = 26 dBW	Allocated	All except pulse or fast scan tv	No Class A2 or Class B operation International Band
21.000 - 21.450 21.070 – 21.120 21.300 – 21.450	Primary	A1 = 26 dBW A2 = 20 dBW A2 = 20 dBW	Allocated	All except pulse or fast scan tv	No Class B operation International Band
24.890 - 24.990	Primary	A1 = 26 dBW	Allocated	All except pulse or fast scan tv	No Class A2 or B operation International Band
28.000 - 29.700 28.050 – 28.150 28.300 – 28.500	Primary	A1 = 26 dBW A2 = 20 dBW B = 13 dBW A2 = 20 dBW B = 13 dBW	Allocated	All except pulse or fast scan tv	No Class B operation International Band
29.700 – 30.000	Secondary	26 dBW		All	Secondary basis during disaster exercises and emergency

Frequency bands in MHz	The Amateur Service	Maximum Power (in dB relative to 1 watt) PEP	Satellite	Permitted types of transmission	(a) Remarks
					situations. Single frequency mobile applications.
40.675 – 40,685	Primary	A1 = 13 dBW	Allocated	All except pulse or fast scan tv	Propagation study only
50.000 - 54.000	Co-primary	A1 = 26 dBW A2 = 26 dBW		All except pulse or fast scan tv	No Class B operation
70.000 - 70.300	Secondary	All Classes 14 dBW		All except pulse or fast scan tv	
144 – 146	Primary	A1 = 26 dBW A2 = 26 dBW B = 13 dBW	Allocated	All except pulse or fast scan tv	International Band
430 – 440	Co-Primary.	A1 = 26 dBW A2 = 26 dBW B = 13 dBW		All except pulse or fast scan tv	
435-438			Allocated		
1240 – 1300	Secondary	A1 = 26 dBW A2 = 26 dBW		All except pulse	International
1260 – 1270			Allocated		
2300 – 2450	Secondary. Users must accept interference from ISM users	A1 = 26 dBW A2 = 26 dBW		All except pulse	No Class B operation
5650 – 5850	Secondary. Users must accept interference from ISM users	A1 = 26 dBW A2 = 26dBW	Allocated	All except pulse	No Class B operation International
10000 – 10450	Secondary	A1 = 26 dBW A2 = 26 dBW		All - including pulse	No Class B operation

Frequency bands in MHz	The Amateur Service	Maximum Power (in dB relative to 1 watt) PEP	Satellite	Permitted types of transmission	(a) Remarks
10450 – 10500	Secondary	A1 = 26 dBW A2 = 26 dBW	Allocated	All - including pulse	No Class B operation International
24000 – 24050	Primary	A1 = 26 dBW A2 = 26 dBW	Allocated	All - including pulse	No Class B operation International
24050 – 24250	Secondary. Users must accept interference from ISM users	A1 = 26 dBW A2 = 26 dBW		All - including pulse	No Class B operation International
47000 – 47200	Primary	A1 = 26 dBW A2 = 26 dBW	Allocated	All - including pulse	No Class B operation International
75500 – 76000	Primary.	A1 = 26 dBW A2 = 26 dBW	Allocated	All - including pulse	No Class B operation International
76000 – 81000	Secondary. Users must accept interference from ISM users	A1 = 26 dBW A2 = 26 dBW	Allocated	All - including pulse	No Class B operation International
142000 – 144000	Primary.	A1 = 26 dBW A2 = 26 dBW	Allocated	All - including pulse	No Class B operation International
144000 – 149000	Secondary. Users must accept interference from ISM users	A1 = 26 dBW A2 = 26 dBW	Allocated	All - including pulse	No Class B operation International
241000 – 248000	Secondary	A1 = 26 dBW A2 = 26 dBW	Allocated	All - including pulse	No Class B operation International
248000 – 250000	Primary	A1 = 26 dBW A2 = 26 dBW	Allocated	All – including pulse	No Class B operation International