

ANNEX TO RESOLUTION No. 365, OF 10 MAY 2004
REGULATION ON RESTRICTED RADIATION RADIO COMMUNICATIONS
EQUIPMENT

CHAPTER I
OBJECTIVES AND DEFINITIONS

Art. 1. The objective of this Regulation is to specify the characteristics of restricted radiation equipment and establish the conditions for the use of radio frequencies so that such equipment can be used without a station operating license or a grant for authorization to use radio frequencies, pursuant to Art. 163, paragraph 2, indent I, of Law No. 9472, of 16 July 1997.

Art. 2. For purposes of this Regulation, the following definitions and concepts shall apply:

I – Auditory Assistance Device refers to any apparatus used to provide auditory assistance to a handicapped person or persons. Such a device shall be used for auricular training in educational institutions, for auditory assistance at places of public gatherings, such as a church, theater, or auditorium, and for auditory assistance to handicapped individuals, exclusively, in other locations;

II – Biomedical Telemetry Device refers to equipment used to transmit measurements of human or animal biomedical phenomena to a receiver within a restricted area;

III – Periodic Operation Device refers to equipment operated in a discontinuous manner whose transmission duration time and silent period are specified in this Regulation;

IV – Electromagnetic Field Disturbance Emitter-Sensor refers to any device that establishes a radiofrequency field in its vicinity and detects changes in such field resulting from the movement of living beings or objects within its operating range;

V – Radiocommunications Signals Blocking Equipment refers to the equipment designed to avoid the use of a radio frequencies or a specific frequency band for communications;

VI – Cable Locating Equipment refers to a device used intermittently to locate buried cables, lines, ducts, and similar elements or structures;

VII – Restricted Radiation Radiocommunications Equipment refers to the generic term given equipment, apparatus, or devices that use radio frequencies for a variety of applications, in which the corresponding emissions produce an electromagnetic field whose strength falls within the limits established in this Regulation. Subsequently, this Regulation may specify a maximum transmission power or power density level in lieu of field strength;

VIII – General-purpose Radiocommunications Equipment refers to any portable unit capable of bidirectionally transmitting voice communications;

IX – Spread Spectrum refers to the technology by which the average energy of the transmitted signal is spread over a bandwidth significantly wider than the bandwidth containing the information. Systems employing such technology compensate for the use of a wider transmission bandwidth by means of a lower power spectral density and an improvement in the rejection of the interfering signals from other systems operating within the same frequency band;

X – Harmful Interference refers to any emission, radiation, or induction that obstructs, seriously degrades, or repeatedly interrupts the telecommunication;

XI – Cordless Microphone refers to a system comprised of a microphone integrated to a transmitter and a receiver designed to enable the user freedom of movement without the restrictions imposed by physical transmission means (cables);

XII – Digital Modulation refers to the process by which some characteristic of the carrier wave (frequency, phase, amplitude, or combinations thereof) is varied in accordance with a digital signal (a signal consisting of coded pulses or states derived from quantized information);

XIII – Frequency Hopping refers to the technique by which the energy is spread by changing the center transmission frequency several times per second, according to a pseudorandom sequence of channels. Such sequence is used repeatedly, so that the transmitter continuously recycles the same sequence of changed channels;

XIV – Direct Sequence refers to the technique by which the carrier is modulated by combining the signal information, which is usually digital, with a high-speed binary sequence. The binary code – a sequence of fixed-length pseudorandom bits that is continuously recycled by the system – dominates the modulating function and is the direct cause of the wide spreading of the transmitted signal;

XV – Pseudorandom Sequence refers to a binary data stream that is defined by properties of a random sequence and also a non-random sequence, at the same time;

XVI – Wireless Access Systems, including Radio Local Access Networks, refers to a term given equipment, apparatus, or devices employed in various applications in local wireless networks which require high transmission speeds, i.e., at least 6 Mbit/s, in the frequency bands and power levels established in this Regulation;

XVII – Perimeter Protection System refers to an electromagnetic field disturbance emitter-sensor that employs radio-frequency transmission lines as the radiating source and is installed in such a way that allows the system to detect movement within the protected area;

XVIII – Wireless PABX System refers to a system consisting of a base station connected to a Private Automatic Branch Exchange (PABX) and mobile terminal units that communicate directly with such base station. Transmissions from the mobile terminal unit are received by the base station and transferred to the PABX;

XIX – Indoor Sound System refers to a system composed of a transmitter and receivers integrated with loudspeakers for purposes of substituting the physical means of interconnection of the sound source to the speakers;

XX – Cordless Telephone System refers to the system consisting of two transceivers, one of which is a base station that connects to the public switched telephone network and the other a mobile unit that communicates directly with the base station. Transmissions from the mobile unit are received by the base station and transferred to the Fixed Switched Telephone Service (FSTS) network. Information received from the public switched telephone network is transmitted by the base station to the mobile unit;

XXI – Telecommand refers to the use of telecommunication for the transmission of radio signals to initiate, modify, or terminate functions of equipment at a distance;

XXII – Telemetry refers to the use of telecommunication for automatical indicating or recording measurements at a distance from the measuring instrument.

CHAPTER II GENERAL CONDITIONS

Art. 3. Radio communications stations associated with the restricted radiation equipment defined in this Regulation are exempt from licensing requirements for their deployment and operation.

Stand-alone Paragraph. When the operation of radio communications can be defined as the provision of telecommunications services, the telecommunications service provider is subject to the provisions set forth in the Regulation of Telecommunications Services, approved by Resolution No. 73, of 25 November 1998, or any other that subsequently replaces such Regulation.

Art. 4. Radio communications stations associated with restricted radiation equipment operate on a secondary basis, meaning that such stations shall accept harmful interference caused by any other radio communications station and shall not cause interference to any system operating on a primary basis.

Stand-alone Paragraph. Restricted radiation equipment that causes harmful interference to any system operating on a primary basis shall cease operations immediately until the cause of the interference has been removed.

Art. 5. The restricted radiation equipment operating in accordance with the provisions established in this Regulation shall bear a certification issued or approved by Anatel, under the terms of the directives in force.

Paragraph 1. The certification shall include the status of restricted radiation conferred on the equipment, as well as the maximum allowable field strength within a determined distance, as specified in this Regulation, and the type of antenna permitted during the use of the equipment.

Paragraph 2. Alternatively, the certification shall specify a maximum transmitting power or power density level in place of the field strength, provided such an alternative is included in this Regulation.

Art. 6. The restricted radiation equipment shall bear a prominently located, permanent label with the following statement: “This equipment operates on a secondary basis and, consequently, must accept harmful interference, including from stations of the same kind, and may not cause harmful interference to systems operating on a primary basis.”

Stand-alone Paragraph. If the equipment is so small or its structure such that it is not practicable to place the statement referred to in the heading of this article on it, such statement shall be placed in a prominent location in the instruction manual supplied to the user by the manufacturer.

Art. 7. Except when explicitly stated otherwise in this Regulation, all restricted radiation equipment shall be designed to ensure that no antenna other than its own can be used.

Paragraph 1. The use of an antenna (with permanent attachments) incorporated to the equipment shall be considered sufficient to comply with the provisions set forth in the heading of this article.

Paragraph 2. The use of standard antenna jacks or electric connectors is prohibited.

Art. 8. The use of restricted radiation equipment is prohibited in the frequency bands listed in Table I. In these frequency bands, only spurious emissions originating in the equipment referred to above that are operating in another band shall be allowed.

Table I
Restricted Frequency Bands

MHz	MHz	MHz	GHz
0.090-0.110	13.36-13.41	399.9-410	5.35-5.46
0.495-0.505	16.42-16.423	608-614	6.65-6.6752
2.1735-2.1905	16.69475-16.69525	952-1215	8.025-8.5
4.125-4.128	16.80425-16.80475	1300-1427	9.0-9.2
4.17725-4.17775	21.87-21.924	1435-1646.5	9.3-9.5
4.20725-4.20775	23.2-23.35	1660-1710	10.6-11.7
6.215-6.218	25.5-25.67	1718.8-1722.2	12.2-12.7
6.26775-6.26825	37.5-38.25	2200-2300	13.25-13.4
6.31175-6.31225	73-74.6	2483.5-2500	14.47-14.5
8.291-8.294	74.8-75.2	2655-2900	15.35-16.2
8.362-8.366	108-138	3260-3267	20.2-21.26
8.37625-8.38675	149.9-150.05	3332-3339	22.01-23.12
8.41425-8.41475	156.52475-156.52525	3345.8-3352.5	23.6-24.0
12.29-12.293	156.7-156.9	4200-4400	31.2-31.8

12.51975-12.52025	242.95-243	4800-5150	36.43-36.5
12.57675-12.57725	322-335.4		above 38.6

Stand-alone Paragraph. Exceptionally, the Medical Implant Communications Systems (MICS) are authorized to operate in the 402 MHz to 405 MHz band, provided they comply with the provisions established in Art. 19.

Art. 9. Except when explicitly stated otherwise in this Regulation, the emissions of restricted radiation equipment shall not be greater than the field strength levels specified in Table II.

Paragraph 1. In the 54-72 MHz, 76-88 MHz, 174-216 MHz, and 470-806 MHz bands, the operation of restricted radiation equipment shall only be permitted under the specific conditions established in this Regulation.

Table II
General Emission Limits

Frequency Bands (MHz, where not specified)	Field Strength (microvolts/meter)	Measurement Distance (meters)
9-490 kHz	2400/F(kHz)	300
490-1705 kHz	24000/F(kHz)	30
1.705-30	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

Paragraph 2. The field strength of restricted radiation equipment operating within bands 26.96-27.28 MHz and 49.82-49.90 MHz shall not exceed:

I – 10,000 microvolts/meter at a distance of 3 meters from the emitter for carrier frequency emissions;

II – 500 microvolts/meter at a distance of 3 meters from the emitter for emissions appearing outside the frequency band, including harmonic frequencies, in any frequency appearing more than 10 kHz from the carrier.

Paragraph 3. The field strength of restricted radiation equipment operating within band 40.66-40.70MHz shall not exceed 1,000 microvolts/meter at a distance of 3 meters from the emitter.

Paragraph 4. The mean field strength limits measured at a distance of 3 meters from the restricted radiation equipment operating within bands 902-907.5 MHz, 915-928 MHz, 2400-2483.5 MHz, 5725-5875 MHz, and 24.00-24.25 GHz frequency shall not exceed the levels specified in Table III. The peak field strength of any emission shall not exceed the mean level of

20 dB. All emissions appearing outside the specified frequency band, except for harmonics, shall be attenuated, at a minimum, 50 dB below the fundamental or adhere to the general emission limits shown in Table II, whichever value is lower.

Table III

Fundamental Frequency	Field Strength of Fundamental Frequency (millivolts/meter)	Field Strength of Harmonics (microvolts/meter)
902-907.5 MHz	50	500
915-928 MHz	50	500
2400-2483.5 MHz	50	500
5725-5875 MHz	50	500
24.00-24.25 GHz	250	2500

Paragraph 5. The use of the 433-435 MHz radiofrequency band by restricted radiation equipment in an indoor area may be done with irradiated power limited to 10mW (e.i.r.p.).

CHAPTER III SPECIFIC CONDITIONS FOR USE

Art. 10. The provisions established in this Chapter present, among other things, alternative emission limits from those set forth in Art. 9 for restricted radiation equipment intended for specific applications and operated within determined frequency bands.

Art. 11. In a majority of cases, undesirable emissions appearing outside the frequency bands specified in the provisions of this Chapter shall be attenuated to the limits defined in Table II. Under no circumstances shall the level of undesirable emissions exceed the field strength of the fundamental emission.

Art. 12. For specific applications prescribed in this Chapter, in the cases in which the frequency stability is not defined, the fundamental frequency shall be maintained at the intervals defined below, so as to minimize the possibility of operating outside the frequency band.

$$[f_{inf} + 0.1(f_{sup} - f_{inf})] < f < [f_{sup} - 0.1(f_{sup} - f_{inf})]$$

where:

f_{inf} = value of the frequency in the lower permitted band edge; and
 f_{sup} = value of the frequency in the upper permitted band edge.

Section I

Periodic Operation Devices

Art. 13. Periodic operation devices operating in the 40.66-40.70 MHz band and above 70 MHz shall meet the following requirements:

I – The field strength emitted, measured from a distance of 3 meters from the emitting device, shall not exceed the values set forth in Table IV, in observance of Art. 8. The more restrictive values apply to the band edges;

Table IV

Fundamental Frequency (MHz)	Field Strength of Fundamental Frequency (microvolts/meter)	Field Strength of Spurious (microvolts/meter)
40.66-40.70	1,000	100
70-130	500	50
130-174	500 to 1,500 (linear interpolation)	50 to 100
174-260	1,500	150
260-470	1,500 to 5,000 (linear interpolation)	150 to 500 (linear interpolation)
Above 470	5,000	500

II – The bandwidth of the emission, determined at the points 20 dB down from the modulated carrier, shall not be greater than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. For devices operating above 900 MHz, the emission shall be no wider than 0.5% of the center frequency;

III – For devices operating in the 40.66-40.70 MHz band, the bandwidth of the emission shall be restricted to the above mentioned frequency band and the carrier frequency tolerance shall be $\pm 0.01\%$, for a temperature variation of -20°C to $+50^{\circ}\text{C}$ and for a primary supply voltage variation of 85% to 115% of the nominal voltage at a temperature of 20°C . Battery-operated equipment shall be tested with nominal voltage of the batteries.

IV – The device shall be equipped with the means to automatically limit its operating time, so that the duration time of each transmission never exceeds 1 second and the silent period between transmissions is, at a minimum, 30 times greater than the transmission time, but never less than 10 seconds.

Art. 14. Periodic operation devices operating in the 40.66-40.70 MHz band and above the 70 MHz frequency band whose emissions are restricted to a signal control transmission, such as those used in alarm systems, devices to open and close doors, remote keys, shall meet the following requirements:

I – The emitted field strength, measured from a distance of 3 meters from the emitter device, shall not be greater than the values set forth in Table V and shall comply with the provisions established in Art. 8 The more restrictive values apply to the band edges;

Table V

Fundamental Frequency (MHz)	Field Strength of Fundamental Frequency (microvolts/meter)	Field Strength of Spurious (microvolts/meter)
40.66-40.70	2,250	225
70-130	1,250	125
130-174	1,250 to 3,750 (linear interpolation)	125 to 375
174-260	3,750	375
260-470	3,750 to 12,500 (linear interpolation)	375 to 1,250 (linear interpolation)
Above 470	12,500	1,250

II – The provisions of indents II and III of Art. 13 shall also apply to the periodic operation devices considered in this article;

III – Any device operated manually shall include a key capable of deactivating the transmitter automatically within, at most, 5 seconds following the interruption of the manual operation;

IV – If a transmitter is activated automatically, the transmission shall be terminated within, at most, 5 seconds following the activation of such transmitter;

V – Periodic transmissions carried out at predetermined regular intervals shall only be permitted in supervised transmissions or sweep tests for the purpose of determining the systemic integrity of transmitters used in security applications. In this case, the periodic rate of transmission shall not last for more than 1 (one) second per hour for each transmitter.

Stand-alone Paragraph. Pursuant to the conditions established in this article, the operation of the following is not permitted:

I – Telecommands (or remote controls) for toys;

II – Continuous transmission systems, such as voice or video;

III – Data transmission systems, except those associated with the use of recognition codes employed to identify an activated sensor or a particular component of the system.

Section II

Telemetry and Wireless Microphone Equipment

Art. 15. Telemetry and wireless microphone equipment operating within the 88-108 MHz band shall meet the following requirements:

I – The emissions shall be restricted to a bandwidth of 200 kHz whose center frequency is the nominal operating frequency. The 200 kHz frequency band shall be wholly contained within the frequency band specified in the heading of this article;

II – The field strength of any emission within the 200 kHz band specified in the heading of this article shall not exceed 250 microvolts/meter at 3 meters, and any emission outside the frequency band shall be limited to the values established in Art. 9.

Art. 16. Wireless microphone equipment operating within bands 54-72 MHz, 76-88 MHz, 174-216 MHz, 470-608 MHz, and 614-806 MHz shall meet the following requirements:

I – The occupied bandwidth shall not be exceed 200 kHz and shall be wholly contained in one of the frequency bands specified in the heading of this article;

II – The emission in any discreet frequency outside the authorized frequency band shall be attenuated in relation to the mean output power of the transmitter of $43 + \log_{10}(P)$ dB, where P represents the mean output power in watts;

III – The frequency stability of the transmitter shall be maintained within 0.005%;

IV – The unmodulated carrier power measured at the transmitter's power amplifier output (antenna input connector) shall be limited to the values presented in Table VI;

V – The maximum deviations permitted in cases in which frequency modulation is employed is ± 75 kHz, although other forms of modulation shall also be permitted.

Table VI

Frequency Band (MHz)	Power (milliwatts)
54-72	50
76-88	50
174-216	50
470-608	250
614-806	250

Section III

Biomedical Telemetry Equipment

Art. 17. Biomedical Telemetry Equipment operating in the 174-216 MHz band shall meet the following requirements:

I – The emissions shall be confined within a 200 kHz band whose center frequency is the nominal operating frequency. The 200 kHz band shall be wholly contained within the frequency band specified in the heading of this article;

II – The field strength of any emission within the specified 200 kHz band shall not exceed 1,500 microvolts/meter at 3 meters, and any emission outside the band shall be limited to 150 microvolts/meter at 3 meters.

Art. 18. Biomedical telemetry equipment shall also operate in the frequency bands allocated to TV broadcasting stations. In this case, the fundamental emissions shall be contained within the 512-566 MHz frequency band and their use restricted to hospitals.

Art. 19. Medical Implant Communication Systems (MICS) shall operate in the 402-405 MHz band, provided that the power (e.i.r.p.) is maintained at 25 microwatts in the 300 kHz reference band.

Section IV

Material Characteristic Telemetry Equipment

Art. 20. Material characteristic telemetry equipment operating within bands 890-907.5 MHz and 915-940MHz shall meet the following requirements:

I – Voice communications or the transmission of any other type of message is prohibited;

II – The field strength of any emission in the specified frequency band shall not exceed 500 microvolts/meter at 30 meters, and any emission outside the frequency band shall comply with the general radiated emission limits specified in Art. 9;

III – The device shall not have any external or user-accessible control that enables such device to be adjusted to permit operation in a manner inconsistent with the provisions established in this article;

IV – Any antenna that is used shall be permanently attached to the equipment and shall not be readily modifiable by the user.

Section V

Electromagnetic Field Disturbance Emitter-Sensor

Art. 21. Electromagnetic field disturbance emitter-sensors, excluding perimeter protection systems, operating within bands 902-907.5 MHz, 915-928 MHz, 2435-2465 MHz, 5785-5815 MHz, 10500-10550 MHz, and 24075-24175 MHz shall meet the following requirements:

I – The field strength at a distance of 3 meters from the emitter in the specified frequency bands shall be in compliance with the specifications contained in Table VII;

Table VII

Fundamental Frequency	Field Strength of Fundamental	Field Strength of Harmonics
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(MHz)	Frequency (millivolts/meter)	(millivolts/meter)
902-907.5	500	1.6
915-928	500	1.6
2435-2465	500	1.6
5785-5815	500	1.6
10500-10550	2500	25
24075-24175	2500	25

II – Regardless of the limits shown in Table VII, harmonic emissions in the restricted bands below 17.7 GHz, as defined in Table I, shall comply with the requirements established in Art. 9;

III – The following requirements apply for the restricted bands at or above 17.7 GHz presented in Table I:

a) In the case of electromagnetic field disturbance emitter-sensors intended for exclusive use within buildings or to open the doors of buildings, the field strength shall not exceed 25 millivolts/meter at a distance of 3 meters from the emitter;

b) Electromagnetic field disturbance emitter-sensors designed for use in motorized vehicles or aircraft shall include features to prevent their continuous operation, unless the emissions from such vehicles and aircraft conform to the limits established in Art. 9;

c) The continuous operation of electromagnetic field disturbance emitter-sensors designed for use on agricultural equipment, vehicles used primarily indoors or for other special purposes, railroad locomotives, railway cars, and any other equipment that travels on fixed tracks shall be permitted. An electromagnetic field disturbance emitter-sensor whose operation is restricted to specific activities of limited duration shall not be considered to be operating in a continuous manner.

IV – With the exception of harmonic emissions, all other emissions outside the frequency bands herein established shall be attenuated at least 50 dB below the level of the fundamental frequency or conform to the values established in Art. 9, whichever is lower.

Art. 22. Vehicle-mounted electromagnetic field disturbance sensors used as vehicle radar systems operating within bands 47.6-46.9 GHz and 76-77 GHz shall meet the following requirements -- If the vehicle is not in motion, the power density of any emission in the operating bands specified in this section shall not exceed 200 nanowatts/cm² at a distance of 3 meters from the exterior surface of the radiating structure;

II – For forward-looking vehicle-mounted field disturbance sensors, the power density of any emission within the operating bands specified in this section shall not exceed 60 microwatts/cm² at a distance of 3 meters from the exterior surface of the radiating structure when the vehicle is in motion;

III – For side-looking and rear-looking vehicle-mounted field disturbance sensors, the power density of any emission within the operating frequency bands specified in this section shall not exceed 30 microwatts/cm² at a distance of 3 meters from the external surface of the radiating structure when the vehicle is in motion;

IV – The power density of any emission outside the operating band shall consist solely of spurious emissions and shall not exceed--

a) 2 picowatts/cm² at a distance of 3 meters from the exterior surface of the radiating structure for vehicle-mounted field disturbance sensors operating within band 46.7-46.9 GHz;

b) 600 picowatts/cm² at a distance of 3 meters from the exterior surface of the radiating structure for forward-looking vehicle-mounted field disturbance sensors operating within band 76-77 GHz;

c) 300 picowatts/cm² at a distance of 3 meters from the exterior surface of the radiating structure for side-looking or rear-looking vehicle-mounted field disturbance sensors operating within band 76-77 GHz;

d) Emissions below 40 GHz shall not exceed the limits defined in Art. 9.

V – Fundamental emissions shall be contained within the frequency bands specified in this article during all conditions of operation. Stand-alone Paragraph. The use of the devices subject to the provisions of this article on aircraft or satellites is prohibited.

Art. 23. Electromagnetic field disturbance emitter-sensors used in perimeter protection systems may operate within bands 54-72 MHz and 76-88 MHz, provided the fundamental emissions are wholly contained within the above mentioned bands and the general emission limits established in Art. 9.

Stand-alone Paragraph. The use of perimeter protection systems operating in such frequency bands is not permitted in private residences.

Art. 24. The field strength of any emissions by electromagnetic field disturbance emitter-sensors used in perimeter protection systems operating within band 40.66-40.70 MHz shall not exceed 500 microvolts/meter at 3 meters.

Stand-alone Paragraph. The field strength of any emission appearing outside the band shall not exceed the general emission limits established in Art. 9.

Section VI

Auditory Assistance Device

Art. 25. Auditory assistance devices operating within bands 72.0-73.0 MHz, 74.6-74.8 MHz, and 75.2-76.0 MHz shall meet the following requirements:

I – The emissions shall be restricted to a bandwidth of 200 kHz centered on the operating frequency. The 200 kHz band shall be contained within the frequency bands specified in the heading of this article;

II – The field strength for any emission within the allowable 200 kHz band shall not exceed 80 millivolts/meter at 3 meters, and any emission outside the band shall be limited to 1,500 microvolts/meter at of 3 meters.

Section VII

Cordless Telephone Systems

Art. 26. Cordless telephone systems shall operate in accordance with the conditions established in this section.

Stand-alone paragraph. Cordless telephone systems may use frequency bands different from those established in this section, provided that such systems meet the general emission limits described in Table II of this Regulation.

Art. 27. Frequency bands: 43.7-47 MHz and 48.7-50 MHz, in accordance with the channel arrangement listed in Table VIII, 902-907.5 MHz and 915-928 MHz, for which a specific channel arrangement is not defined.

Table VIII

Channel No	Base Transmitter (MHz)	Handset Transmitter (MHz)
1	43.720	48.760
2	43.740	48.840
3	43.820	48.860
4	43.840	48.920
5	43.920	49.020
6	43.960	49.080
7	44.110	49.100
8	44.160	49.160
9	44.180	49.200
10	44.200	49.240
11	44.320	49.280
12	44.360	49.360
13	44.400	49.400
14	44.460	49.460
15	44.480	49.500
16	46.610	46.670
17	46.630	49.845
18	46.670	49.860
19	46.710	49.770
20	46.730	49.875

21	46.770	49.830
22	46.830	49.890
23	46.870	49.930
24	46.930	49.990
25	46.970	49.970

Art. 28. The field strength for the emissions in the carrier frequencies specified in Art. 27 shall not exceed the limits established in Table IX.

Table IX

Band (MHz)	Field Strength (microvolts/meter)	Distance (m)
43.7-47 and 48.7-50	10.000	3
902-907.5 and 915-928	50.000	3

Art. 29. The bandwidth occupied by the channel shall be as small as possible so as to reduce interference between adjacent channels and shall not exceed the limits established in Table X.

Table X

Band (MHz)	Maximum Occupied Bandwidth (kHz)
43.7-47 and 48.7-50	20
902-907.5 and 915-928	150

Art. 30. Cordless telephone systems operating in channels 1 to 15 of Table VIII and in the 902-907.5 MHz and 915-928 MHz bands shall incorporate an automatic channel selection mechanism to prevent the establishment of a link in any occupied frequency.

Art. 31. For cordless telephone systems operating within bands 43.7-47 MHz and 48.7-50 MHz, the frequency stability shall be maintained within 0.01% of the operating frequency for a temperature variation of -10° C a $+50^{\circ}$ C at the nominal supply voltage and for values corresponding to a variation of 85% to 115% of the nominal voltage at 20° C.

Art. 32. Cordless telephone systems that use spread spectrum technology shall conform to the conditions established in Section IX.

Section VIII

Wireless PABX Systems

Art. 33. Wireless PABX systems shall operate according to the conditions established in this section.

Art. 34. In the following frequency bands:

I – Band 864-868 MHz, in accordance with the channels listed in Table XI;

Table XI

Channel No.	Frequency (MHz)
01	865.15
02	864.25
03	864.35
04	864.45
05	864.55
06	864.65
07	864.75
08	864.85
09	864.95
10	865.05
11	865.15
12	865.25
13	865.35
14	865.45
15	865.55
16	865.65
17	865.75
18	865.85
17	865.95
18	866.05
19	865.95
20	866.05
21	866.15
22	866.25
23	866.35
24	866.45
25	866.55
26	866.65
27	866.75
28	866.85
29	866.95
30	867.05
31	867.15
32	867.25
33	867.35
34	867.45
35	867.55
36	867.65

37	867.75
38	867.85
39	867.95
40	868.05

II – Band 944-948 MHz, in accordance with the channels listed in Table XII;

Table XII

Channel No.	Frequency (MHz)
01	944.15
02	944.25
03	944.35
04	944.45
05	944.55
06	944.65
07	944.75
08	944.85
09	944.95
10	945.05
11	945.15
12	945.25
13	945.35
14	945.45
15	945.55
16	945.65
17	945.75
18	945.85
19	945.95
20	946.05
21	946.15
22	946.25
23	946.35
24	946.45
25	946.55
26	946.65
27	946.75
28	946.85
29	946.95
30	947.05
31	947.15
32	947.25
33	947.35
34	947.45
35	947.55
36	947.65

37	947.75
38	947.85
39	947.95
40	948.05

III – Band 1910-1930 MHz, for which the channeling has not been defined. Until such time as the channeling is defined, wireless PABX systems operating on the basis of channel separation above 2 MHz between carriers shall not be permitted.

Art. 35. The maximum peak output power of the transmitter shall not exceed 250 mW.

Stand-alone Paragraph. Systems that use antennas with directional gain above 2 dBi shall reduce the maximum output power of the transmitter by the corresponding amount in dB that the directional gain of the antenna exceeds 2 dBi.

Art. 36. The bandwidth occupied by the channel shall be as small as possible so as to reduce interference among adjacent channels and shall not exceed the limits defined in Table XIII.

Table XIII

Frequency (MHz)	Maximum Occupied Bandwidth (kHz)
864-868	100
944-948	100
1910-1930	2000

Art. 37. Wireless PABX systems operating in accordance with the requirements established in this article shall have access to any of the channels set forth in Art. 34 within the specific band in which such system is operating and shall, furthermore, use time-division duplex (TDD), that is, transmit and receive within the same radio-frequency channels. Additionally, such systems shall incorporate dynamic channel selection mechanisms that enable the occupied channels to be monitored, even during the course of a conversation, and an exchange effected, in the event there is an available channel that is in better condition than the one being used.

Art. 38. Wireless PABX systems that use spread spectrum technology shall conform to the conditions established in Section IX.

Section IX

Equipment Employing Spread Spectrum Technology or Other Digital Modulation Technologies

Art. 39. Equipment employing spread spectrum technology or other digital modulation technologies operating in the frequency bands 902-907.5 MHz, 915-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz shall meet the requirements set forth in this section.

Paragraph 1. Except when otherwise specified, equipment operating in accordance with the provisions of this section may be utilized for fixed service, point-to-point and point-to-multipoint applications, and in mobile service applications.

Paragraph 2. The conditions established in this section, for the frequency band 2400-2483.5 MHz, do not apply to equipment whose corresponding stations use an e.i.r.p. greater than 400 mW, in localities having a population of more than 500,000 people. In this case, the stations must be licensed by the Agency, under the terms of the specific regulations pertinent to this band.

Paragraph 3. In the frequency band 2400-2483.5 MHz, only the use of spread spectrum technology or OFDM (Orthogonal Frequency Division Multiplex) technology shall be permitted.

Art. 40 Frequency hopping systems shall have the following characteristics:

I – The hopping channel carrier frequencies shall be separated by a minimum of 25 kHz or the 20- dB bandwidth of the hopping channel, whichever is greater;

II – The system shall hop to the frequencies selected at the hopping rate from a pseudorandomly ordered list of hopping frequencies;

III – Each transmitter shall, on the average, use each frequency equally;

IV – The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals;

V – In addition to the provisions of the above indents, the following requirements apply to frequency hopping systems operating in the 902-907.5 MHz and 915-928 MHz bands:

a) The maximum peak output power of the transmitter shall not exceed 1 Watt for systems employing at least 50 frequency hopping channels and 0.25 watt for systems employing fewer than 50 frequency hopping channels;

b) If the bandwidth of the hopping channel at 20 dB is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20-second period;

c) If the bandwidth of the hopping channel at 20 dB is equal to or greater than 250 kHz, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be reater than 0.4 seconds within a 10-second period;

d) The maximum 20-dB bandwidth of the hopping channel shall be limited to 500 kHz.

VI – In addition to the provisions set forth in indents I to IV, frequency hopping systems operating in the frequency band 2400-2483.5 MHz shall meet the following requirements:

a) The systems shall use at least 15 non-overlapping hopping frequencies;

b) The average time of occupancy on any frequency shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed;

c) The systems may avoid or suppress transmissions on a specific hopping frequency, provided that at least 15 non-overlapping hopping channels are employed;

d) For systems employing fewer than 75 hopping frequencies, the maximum peak output power of the transmitter shall not exceed 125 mW;

e) For systems employing 75 hopping frequencies or more, the maximum peak output power of the transmitter shall not exceed 1 Watt.

VII– In addition to the provisions set forth in indents I to IV, frequency hopping systems operating in the frequency bands 5725-5850 MHz shall meet the following requirements:

a) The maximum peak output power of the transmitter shall not exceed 1 Watt;

b) The systems shall use at least 75 hopping frequencies;

c) The maximum 20-dB bandwidth of the hopping channel shall be limited to 1 MHz;

d) The average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 30-second period.

Art. 41. Systems employing direct sequence or other digital modulation techniques shall have the following characteristics:

I – The bandwidth at 6 dB shall be at least 500 kHz;

II – The maximum peak output power of the transmitter shall not exceed 1 Watt;

III – The peak power spectral density in any 3 kHz band during any time interval of continuous transmission shall not exceed 8 dBm;

IV – For systems operating in the frequency band 2400-2483.5 MHz, whose corresponding stations use an e.i.r.p. of 400 mW or less, in localities having a population of more than 500,000 people, the peak power spectral density in any 3 kHz band during any time interval of continuous transmission shall not exceed 4 dBm.

Art. 42. For purposes of this section, hybrid systems are those systems employing a combination of both direct sequence techniques or other digital modulation techniques and frequency hopping techniques. The frequency hopping operation of the hybrid system, with the direct sequence operation or another digital modulation turned off, shall have an average time of occupancy not greater than 0.4 seconds in any frequency within a time period in seconds equal to the number of hopping frequencies employed multiplied by 0.4. The direct sequence or another

digital modulation operation of the hybrid system, with the frequency hopping operation turned off, shall comply with the power density requirements established in indent III of Art. 41.

Art. 43. Except in the cases prescribed below, equipment employing spread spectrum technology or other digital modulation technologies that make use of transmitting antennas of directional gain greater than 6 dBi shall have the maximum peak output power of the transmitter reduced to levels below those specified in indents V, VI, and VI of Art. 40 and in indent II of Art. 41 by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

I – Systems operating in the 2400-2483.5 MHz band that are used exclusively for fixed service, point-to-point applications may make use of transmitting antennas with directional gain greater than 6 dBi, provided the maximum peak output power of the transmitter is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi;

II – Systems operating in the 5725-5850 MHz band that are used exclusively in fixed service, point to point applications may make use of transmitting antennas with directional gain greater than 6 dBi without any corresponding reduction in transmitter maximum peak output power.

Paragraph 1. Systems used in accordance with the provisions of indents I and II of this article exclude the use of point-to-multipoint systems, omnidirectional applications, and multiple equipment collocated in the same installation and transmitting the same information.

Paragraph 2. The party responsible for operating the equipment in accordance with the provisions of indents I and II of this article shall ensure that the system is used exclusively for fixed service, point-to-point applications. The instruction manuals furnished by the manufacturer shall contain prominently displayed language informing such party of this responsibility.

Art. 44. The radio-frequency power produced in any 100 kHz bandwidth outside the frequency band in which the system is operating, as established in this section, shall be at least 20 dB below the maximum power generated at a 100 kHz interval within the operating band.

Section X

Wireless Access Systems, including Radio Local Area Networks

Art. 45. Wireless access systems, including radio local area networks, operating in the frequency bands 5150-5360 MHz and 5470-5725 shall be used in mobile service applications.

Stand-alone Paragraph. Mobile service applications for users of wireless access systems, including radio local area networks, shall be nomadic, which are wireless access applications in which the user terminal can move freely within the coverage area, but must be stationary while in use.

Art. 46. Wireless access systems, including radio local area networks, operating in the frequency bands 5150-5350 MHz shall meet the following conditions:

- I – Emissions shall be confined to environments inside buildings;
- II – The maximum mean e.i.r.p. shall not exceed 200 mW;
- III – The maximum mean e.i.r.p. spectral density shall not exceed 10 mW/MHz;

Art. 47. Wireless access systems, including radio local area networks, operating in the frequency bands 5470-5725 MHz shall meet the following conditions:

- I – The maximum output power of the transmitter shall not exceed 250 mW;
- II – The maximum mean e.i.r.p. shall not exceed 1 W;
- III – The maximum mean e.i.r.p. spectral density shall not exceed 50 mW/MHz.

Art. 48. For systems operating under the provisions of this section, the spurious emissions or the emissions outside the frequency band in which the system is operating shall be less than an e.i.r.p. limit of -27 dBm/MHz.

Art. 49. Systems operating under the provisions of Articles 46 and 47 of this Regulation shall employ a transmitter power control (TPC) mechanism that allows the dynamic selection of the output power and provides a mitigation factor of at least 3 dB.

Stand-alone Paragraph. Exceptionally, the use of equipment without the TPC mechanism will be permitted. In this case, the mean e.i.r.p. shall be limited to 100 mW for equipment operating in the frequency band 5150-5350 MHz and to 500 mW for equipment operating in the frequency band 5470-5725 MHz.

Art. 50. In the frequency bands 5250-5350 MHz and 5470-5725 MHz, wireless access systems, including the radio local access networks, shall employ a dynamic frequency selection (DFS) mechanism having the following characteristics:

- I – The channel availability check time shall be 60 seconds. No transmission shall be initiated prior to checking channel availability;
- II – Once a channel has been identified as being occupied following a channel availability check, this channel will be subject to a non-occupancy period of 30 minutes;
- III – For equipment operating with a maximum e.i.r.p. of less than 200 mW, the DFS mechanism must be capable of detecting interference signals above a threshold of -62 dBm averaged over a period of 1 microsecond;

IV – For equipment operating with a maximum e.i.r.p. between 200 mW and 1 Watt, the DFS mechanism must be capable of detecting interference signals above a threshold of –64 dBm averaged over a period of 1 microsecond;

V – In case an interference signal above the DFS detection threshold is detected, all transmissions on the respective channel shall cease within 10 seconds.

Stand-alone Paragraph. The use of a DFS mechanism in the frequency band 5150-5250 MHz is permitted; however, the use of such mechanism in this band is not mandatory.

Section XI Cable Locating Equipment

Art. 51. Cable locating equipment may operate in any frequency between 9 kHz and 490 kHz, provided such equipment meets the following requirements:

I – From 9 kHz up to, but not including, 45 kHz, the peak output power shall not exceed 10 Watts;

II – From 45 kHz to 490 kHz, the peak output power shall not exceed 1 Watt.

Section XII Automatic Vehicle Identification Systems

Art. 52. Automatic vehicle identification systems (AVIS) that use sweep-frequency techniques and operate within bands 2.9-3.26 GHz, 3.267-3.332 GHz, 3.339-3.3458 GHz, and 3.358-3.6 GHz shall meet the following requirements:

I – The field strength at any point within the swept frequency band shall be limited to 3,000 microvolts/meter/MHz at 3 meters in any direction;

II – An automatic vehicle identification system, when in its operating position, shall not produce a field strength greater than 400 microvolts/meter/MHz at 3 meters in any direction from the equipment within ± 10 degrees of the horizontal plane;

III – The field strength of emissions outside the swept frequency band shall be limited to 100 microvolts/meter/MHz at 3 meters, measured from 30 MHz to 20 GHz for the whole system;

IV – The minimum sweep repetition rate of the signal shall not be lower than 4,000 sweeps per second, and the maximum sweep repetition shall not exceed 50,000 sweeps per second;

V – The emission from an automatic vehicle identification system shall occur only when the vehicle to be identified is within the radiated field of the system;

VI – For purposes of fulfilling the provisions of indent II of this article, the automatic vehicle identification systems shall contain a statement on the label prescribed in Art. 6 regarding the variation in degrees in relation to the horizontal plane that the equipment (or antenna) may not be pointed.

Section XIII

Telecommand Systems

Art. 53. Telecommand systems operating within bands 26 MHz, 27 MHz, 50 MHz, 53 MHz, 72 MHz, and 75 MHz that are employed only for the unidirectional remote operation of devices shall meet the requirements established in this section.

Stand-alone Paragraph. The operation of a telecommand system shall not be permitted for--

- a) Voice transmissions;
- b) The operation of another telecommand transmitter from a point other than where such transmitter is located (operation by remote control);
- c) Data transmissions, except for encoded signals employed for the recognition of a specific control device.

Art. 54. The telecommand systems subject to the provisions of this section shall operate within the channels contained in Tables XIV to XVIII.

Table XIV
Channels for 26 MHz and 27 MHz Bands

Channel No.	Frequency (MHz)
01	26.995
02	27.045
03	27.095
04	27.145
05	27.195
06	27.225

Table XV
Channels for 50 MHz Band

Channel No.	Frequency (MHz)
01	50.80
02	50.82
03	50.84

04	50.86
05	50.88
06	50.90
07	50.92
08	50.94
09	50.96
10	50.98

Table XVI
Channels for 53 MHz Band

Channel No.	Frequency (MHz)
01	53.10
02	53.20
03	53.30
04	53.40
05	53.50
06	53.60
07	53.70
08	53.80

Table XVII
Channels for 72 MHz Band

Channel No	Frequency (MHz)
01	72.01
02	72.03
03	72.05
04	72.07
05	72.09
06	72.11
07	72.13
08	72.15
09	72.17
10	72.19
11	72.21
12	72.23
13	72.25
14	72.27
15	73.29
16	72.31
17	72.33
18	72.35
19	73.37
20	72.39
21	72.41
22	7243

23	72.45
24	72.47
25	72.49
26	72.51
27	72.53
28	72.55
29	72.57
30	72.59
31	72.61
32	72.63
33	72.65
34	72.67
35	72.69
36	72.71
37	72.73
38	72.75
39	72.77
40	72.79
41	72.81
42	72.83
43	72.85
44	72.87
45	72.89
46	72.91
47	72.93
48	72.95
49	72.97
50	72.99

Table XVIII
Channels for 75 MHz Band

Channel No.	Frequency (MHz)
01	75.41
02	75.43
03	75.45
04	75.47
05	75.49
06	75.51
07	75.53
08	75.55
09	75.57
10	75.59
11	75.61

12	75.63
13	75.65
14	75.67
15	75.69
16	75.71
17	75.73
18	75.75
19	75.77
20	75.79
21	75.81
22	75.83
23	75.85
24	75.87
25	75.89
26	75.91
27	75.93
28	75.95
29	75.97
30	75.99

Art. 55. The bandwidth occupied by the channel shall be as small as possible so as to reduce interference among adjacent channels and shall not exceed 8 kHz.

Art. 56. The frequency stability for the transmitters of telecommand systems shall be maintained within 0.005%.

Stand-alone Paragraph. The frequency stability for the transmitters of telecommand systems operating within bands 72 MHz and 75 MHz shall be maintained within 0.002%.

Art. 57. The maximum power of the carrier at the output of the transmitter shall not exceed the limits in Table XIX under any condition of modulation.

Table XIX

Frequency Bands (MHz)	Power (Watts)
26 and 27	4.00
50 and 53	1.00
72 and 75	0.75

Stand-alone Paragraph. For telecommand systems operating within band 27.255 MHz, corresponding to channel 6 of the channels listed in Table XIV, a transmitter output power of up to 25 watts is permitted.

Art. 58. The antenna employed in telecommand systems shall have no gain as compared to a halfwave dipole wave and must be vertically polarized.

Stand-alone Paragraph. The height of the antenna in relation to the ground shall be limited to 18 meters.

Art. 59. The use of telecommand systems within the frequencies listed in Tables XV and XVI is restricted to persons bearing any class of amateur radio station operating licenses (*Certificado de Operador de Estações de Radioamador-COER*).

Art. 60. The use of telecommand systems within the frequencies enumerated in Table XVII is restricted to the operation of model aircraft devices, and within the frequencies enumerated in Table XVIII, the use of such systems is restricted to the operation of model surface devices.

Art. 61. In order to prevent harmful interference to licensed stations and in the reception of TV channels 4 and 5, the user of telecommand equipment operating in accordance with the provisions established in this section shall be guided by the responsibility to use the system appropriately. The instruction manuals furnished by the manufacturer shall contain prominently displayed language outlining such responsibility.

Section XIV

General-Purpose Radio Communications Equipment

Art. 62. General-purpose radio communications equipment is intended for bidirectional voice communications between two persons and shall operate under the following conditions:

I – In the frequency bands from 462.53 MHz to 462.74 MHz and 467.53 MHz to 467.74 MHz, pursuant to the channels listed in Table XX;

Table XX

Channel No.	Frequency (MHz)
01	462.5625
02	462.5875
03	462.6125
04	462.6375
05	462.6625
06	462.6875
07	462.7125
08	467.5625
09	467.5875
10	467.6125
11	467.6375
12	467.6625
13	467.6875
14	467.7125

II – The effective radiated power for the frequencies specified in this Section XIV shall not exceed 500 mW;

III – The bandwidth occupied by the channel shall be as small as possible so as to reduce interference among adjacent channels and shall not exceed 12.5 kHz;

IV – The frequency stability for general-purpose radio communications equipment shall be maintained within 0.00025%;

V – The use of general-purpose radio communications equipment in unidirectional transmissions is permitted only to:

- a) Establish communications with another person;
- b) Send an emergency message;
- c) Provide traveler assistance; or
- d) Conduct a brief test.

VI – General-purpose radio communications equipment may transmit tones to make contact or to continue communications with particular equipment of the same system. If the tone is audible (more than 300 Hz), it must last no longer than 15 seconds at one time. If the frequency of the tone is below 300 Hz, such tone may be transmitted continuously while the user is talking;

VII – Under no circumstances may an interconnection be established between general-purpose radio communications equipment and networks that provide support for services provided in the collective interest under the public or private regime.

VIII – The manufacturer shall advise users of general-purpose radio communications equipment that emergency communication messages related to the safety of life must be given priority at all times and in all channels.

Section XV

Low-Power Radio Systems Operating at 19 GHz

Art. 63. Low-power radio systems employed for fixed service, point-to-multipoint applications that are used exclusively indoors shall operate in accordance with the requirements established in this section.

Art. 64. The carrier frequencies for radio-frequency channels shall conform to the channels in Table XXI.

Table XXI

Channel No.	Frequency (MHz)
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1	19165
2	19175
3	19185
4	19195
5	19205
6	19215
7	19225
8	19235
9	19245
10	19255

Art. 65. The bandwidth occupied by the channel shall be as small as possible so as to reduce interference among adjacent channels and shall not exceed 17 MHz.

Art. 66. The frequency stability of the carrier shall be maintained within a limit of 0.001% of the nominal frequency of the channel.

Art. 67. The output power delivered by the transmitter to the antenna of a station shall be the smallest necessary to execute a high quality and reliable service and shall be limited to a maximum level of 100 mW.

Stand-alone Paragraph. The use of lower transmit powers, associated with higher-gain antennas, shall be one of the objectives of the project, and the e.i.r.p. shall not exceed 30 dBm.

Art. 68. Within any 4-kHz band between 18.82 GHz and 18.87 GHz or 19.16 GHz and 19.21 GHz, whose center frequency is separated from the channel center frequency by more than 50% of the channel bandwidth, the average power of the emissions shall be attenuated to the lower of the two values below:

- a) $A = 35 + 0.003(F - 0.5 \times B)$ dB; or
- b) 80 dB.

Stand-alone Paragraph. In the equation presented in the heading of this article, “A” is the attenuation in dB below the output power of the channel for a given polarization; “F” is the absolute level in kHz of the difference between the center frequency of the 4 kHz band and the center frequency of the channel; and “B” is the channel bandwidth in kHz.

Art. 69. In any 4 kHz band whose center frequency is outside the 18.82-18.87 GHz or the 19.16-19.21 GHz band, the average power of the emissions shall be attenuated to $A = 43 + 10 \log(P)$ dB.

Stand-alone Paragraph. In the equation presented in the heading of this article, “A” is the attenuation in dB below the level of the output power of the channel for a given polarization, and “P” is the mean output power in watts.

Art. 70. Low-power radio systems operating in accordance with the provisions of this section may access any of the channels in Table XXI, in which such systems shall employ time-division duplex (TDD), that is, transmit and receive in the same radio-frequency channel.

Section XVI

Indoor Sound System

Art. 71. Indoor sound systems operating between 225 MHz and 270 MHz shall comply with the following requirements:

I – The emissions shall be confined within, at most, a 200 kHz bandwidth whose center frequency is the nominal operating frequency. The 200 kHz band shall be wholly contained within the band specified in the heading of this article;

II – The field strength of any emission within the specified 200 kHz band shall not exceed 580 millivolts/meter at 3 meters, and any emission outside the band shall be limited to the levels established in Art. 9;

III – The use of this equipment shall be restricted to the interior of the building in which it is operating.

Section XVII

Radiocommunication Signals Blocking Equipment

Art. 72. The Radiocommunication Signals Blocking Equipment, which is used exclusively inside a building or real estate property, shall operate in accordance with the conditions established in this section.

Art. 73. The radio frequency bands shall consist of those where the system is designed to block signals and shall include frequency bands used for the communications between the user terminal and the base or nodal station, or between user terminals, in the following services or applications:

I - Mobile Cellular Service;

II - Mobile Personal Service;

III - Specialized Mobile Service;

IV - Paging;

V - Advanced Shortmessaging Service;

VI - Multimedia Communications Services;

VII - Fixed wireless access for provision of the Fixed Switched Telephone Service intended for use by the general public (STFC);

VIII - Global Mobile Satellite Service;

IX - Cordless Telephone System, Wireless PABX Systems, and Radiocommunication Equipment intended for use by the general public;

X - Other services or applications to be designated in specific Anatel Acts.

Art. 74. The provisions under art. 4 shall only apply to any interference that may be caused to equipment operating, on a primary basis, outside the building or real estate property that the Radiocommunication Signals Blocking equipment is designed to block.

Art. 75. Additional conditions related to the use of the Radiocommunication Signal Equipment Block shall be subject to a specific ruling instrument issued by Anatel.

CHAPTER IV

FINAL PROVISIONS

Art. 76. For the purpose of optimizing the use of the radio-frequency spectrum, Anatel may determine modifications to the requirements established in this Regulation, including for systems in operation.

Art. 77. Existing restricted radiation equipment that does not comply with the provisions herein established on the date of publication of this Regulation may continue operating for the duration of its life span, provided such equipment is operating in accordance with the regulations previously in force.

Stand-alone Paragraph. Restricted radiation equipment that make use of radio frequencies in the band 2400-2483.5 MHz and whose corresponding stations use an e.i.r.p. greater than 400 mW, in localities having a population of more than 500,000 people, shall comply with the specific regulations applicable to such conditions.