

No. 21913

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**BRAZIL, ARGENTINA  
and  
URUGUAY**

**Agreement for the coordination of the assignment and use of  
FM (frequency modulation) sound broadcasting chan-  
nels in the metric wave band 88-108 MHz (with  
appendices). Signed at Montevideo on 8 July 1980**

*Authentic texts: Portuguese and Spanish.*

*Registered by Brazil on 31 May 1983.*

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**BRÉSIL, ARGENTINE  
et  
URUGUAY**

**Accord sur la coordination de l'assignation et de l'emploi  
des canaux de radiodiffusion sonore à modulation  
de fréquence dans la bande des ondes métriques (88-  
108 MHz) [avec appendices]. Signé à Montevideo  
le 8 juillet 1980**

*Textes authentiques : portugais et espagnol.*

*Enregistré par le Brésil le 31 mai 1983.*

## [TRANSLATION — TRADUCTION]

AGREEMENT<sup>1</sup> BETWEEN THE GOVERNMENT OF THE ARGENTINE REPUBLIC, THE GOVERNMENT OF THE FEDERATIVE REPUBLIC OF BRAZIL AND THE GOVERNMENT OF THE EASTERN REPUBLIC OF URUGUAY FOR THE COORDINATION OF THE ASSIGNMENT AND USE OF FM (FREQUENCY MODULATION) SOUND BROADCASTING CHANNELS IN THE METRIC WAVE BAND 88-108 MHz

The Government of the Argentine Republic,  
The Government of the Federative Republic of Brazil and  
The Government of the Eastern Republic of Uruguay  
Have decided to conclude the following Agreement:

*Article I.* OBJECT OF THE AGREEMENT

This Agreement concerns the assignment and use of FM sound broadcasting channels in the metric waveband 88-108 MHz in the coordination zones established in article V.

*Article II.* DEFINITIONS

1. *Administration.* This is the telecommunications body or governmental department of each Government that is competent to participate in the performance and execution of this Agreement.

2. *FM sound broadcasting station.* This is a station authorized to transmit FM sound broadcasts on the 88-108 MHz band intended mainly for reception by the general public.

3. *FM sound broadcasting channel.* This is a band 200 kHz in width, indicated by its central frequency, included between the frequencies 88-108 MHz.

4. *Effective radiated power in one direction (ERP).* This is the input power of the antenna, multiplied by the antenna gain in this direction.

5. *Antenna gain.* This is the ratio between the input power of the reference antenna and the input power of the antenna in question which is necessary to enable both to produce, in a given direction, the same field at the same distance. The reference antenna is the half-wave dipole isolated in space (222 mV/m to 1 km for 1 kW of radiated power).

6. *FM subsidiary service or FM special multiplex service.* This is a service which, using the multiplex system of broadcasting, makes it possible to transmit, in addition to the regular programme service, one or more supersonic FM signals which may be received by listeners who have special receivers.

<sup>1</sup> Entered into force provisionally on 8 July 1980, the date of signature, and definitively on 10 September 1982, the date on which Brazil notified the signatory States of the deposit of the second instrument of ratification (by Uruguay and Brazil), in accordance with article XIX.

7. Terms and symbols used in this Agreement but not defined herein shall conform to the definitions given in the recommendations of Study Group 10 of the International Radio Consultative Committee (CCIR), Geneva 1974.

### Article III. CHANNELS

1. The band located between 88 and 108 MHz is divided into 100 channels each of 200 kHz width.

2. For the FM sound broadcasting service the assigned channels and frequencies are listed in table I.

Table I. ASSIGNMENT OF CHANNELS FOR FM TRANSMITTERS

| Channel | Frequency (MHz) | Channel | Frequency (MHz) | Channel | Frequency (MHz) |
|---------|-----------------|---------|-----------------|---------|-----------------|
| 201     | 88,1            | 235     | 94,9            | 269     | 101,7           |
| 202     | 88,3            | 236     | 95,1            | 270     | 101,9           |
| 203     | 88,5            | 237     | 95,3            | 271     | 102,1           |
| 204     | 88,7            | 238     | 95,5            | 272     | 102,3           |
| 205     | 88,9            | 239     | 95,7            | 273     | 102,5           |
| 206     | 89,1            | 240     | 95,9            | 274     | 102,7           |
| 207     | 89,3            | 241     | 96,1            | 275     | 102,9           |
| 208     | 89,5            | 242     | 96,3            | 276     | 103,1           |
| 209     | 89,7            | 243     | 96,5            | 277     | 103,3           |
| 210     | 89,9            | 244     | 96,7            | 278     | 103,5           |
| 211     | 90,1            | 245     | 96,9            | 279     | 103,7           |
| 212     | 90,3            | 246     | 97,1            | 280     | 103,9           |
| 213     | 90,5            | 247     | 97,3            | 281     | 104,1           |
| 214     | 90,7            | 248     | 97,5            | 282     | 104,3           |
| 215     | 90,9            | 249     | 97,7            | 283     | 104,5           |
| 216     | 91,1            | 250     | 97,9            | 284     | 104,7           |
| 217     | 91,3            | 251     | 98,1            | 285     | 104,9           |
| 218     | 91,5            | 252     | 98,3            | 286     | 105,1           |
| 219     | 91,7            | 253     | 98,5            | 287     | 105,3           |
| 220     | 91,9            | 254     | 98,7            | 288     | 105,5           |
| 221     | 92,1            | 255     | 98,9            | 289     | 105,7           |
| 222     | 92,3            | 256     | 99,1            | 290     | 105,9           |
| 223     | 92,5            | 257     | 99,3            | 291     | 106,1           |
| 224     | 92,7            | 258     | 99,5            | 292     | 106,3           |
| 225     | 92,9            | 259     | 99,7            | 293     | 106,5           |
| 226     | 93,1            | 260     | 99,9            | 294     | 106,7           |
| 227     | 93,3            | 261     | 100,1           | 295     | 106,9           |
| 228     | 93,5            | 262     | 100,3           | 296     | 107,1           |
| 229     | 93,7            | 263     | 100,5           | 297     | 107,3           |
| 230     | 93,9            | 264     | 100,7           | 298     | 107,5           |
| 231     | 94,1            | 265     | 100,9           | 299     | 107,7           |
| 232     | 94,3            | 266     | 101,1           | 300     | 107,9           |
| 233     | 94,5            | 267     | 101,3           |         |                 |
| 234     | 94,7            | 268     | 101,5           |         |                 |

*Article IV.* DIVISION OF THE 88-108 MHz BAND

This band is divided into three (3) sub-bands based on the station categories defined in article IX and on the following table.

| <i>Channels No.</i> | <i>Category</i>                         |
|---------------------|---|
| 201-220 .....       | Low-power                               |
| 221-290 .....       | High-power<br>Medium-power              |
| 291-300 .....       | High-power<br>Medium-power<br>Low-power |

*Article V.* COORDINATION ZONES

1. The coordination zones are made up of strips of territory whose widths in each of the countries is measured, in the direction of each country, from the following base-lines:

- Land boundary: the width of the strip is measured from this boundary;
- Water boundary, (lake, river or sea): the width of the strip is measured from the coast of the neighbouring country.

The width of the strip from the boundary towards the territory of each country, for the categories of stations established in article IX, is as follows:

- Low-power (channels 201-220): 124 km;
- Low-power (channels 291 to 300): 330 km;
- Medium-power: 373 km;
- High-power: 395 km.

The coordination zones are marked on the map in appendix 1.

2. If an Administration, in claiming a new assignment, has doubts about the inclusion of this assignment in one of the strips described in paragraph 1 of this article, it shall consider the assignment to be included in that strip and consequently shall comply with the notification and consultation procedure provided for in article XIII.

*Article VI.* TRANSMISSION STANDARDS

1. *Frequency tolerance.* The frequency tolerance of the transmitter shall be  $\pm 2$  kHz.

2. *Frequency deviation.* The maximum frequency deviation is  $\pm 75$  kHz, defined as corresponding to 100 per cent modulation.

3. *Polarization.* The radiated signals shall preferably have horizontal polarization.

4. The effective radiated power and the antenna height of the station must be such that they do not exceed the distances established in table II, column 3, of article VIII.

*Article VII. PROTECTION*

1. For each station a contour of 250  $\mu\text{V}/\text{m}$  shall be established as the limit of its service area; for planning purposes, the following ratios between the wanted and interfering signals shall be applied in this contour.

| <i>Separation of channels<br/>in kHz</i> | <i>Protection<br/>ratio</i> |
|--|-----------------------------|
| 0  | 50 : 1                      |
| $\pm 200$                                | 2 : 1                       |
| $\pm 400$                                | 1 : 10                      |

NOTE: In the case of channels separated by  $\pm 600$  kHz it is sufficient that one station should not be located within the protected contour of the other.

2. The protection of the service area of stations operating between channels 201 and 220 in the contour F (50,50) is based on the protection ratios specified in this article between the wanted signal F (50,50) and the interfering signal F (50,50) in accordance with the separation in kHz.

3. The protection of the service area of stations operating between channels 221 and 300 in the contour F (50,50) is based on the protection ratios specified in this article between the wanted signal F (50,50) and the interfering signal F (50,10) in accordance with the separation in kHz.

*Article VIII. CLASSIFICATION OF STATIONS*

Stations shall be classified into Class I, II, III, IV and V defined by their maximum and minimum requirements set forth in tables II and III.

*Table II. MAXIMUM REQUIREMENTS*

| <i>Class</i> | <i>Effective radiated<br/>power (ERP)<br/>(kW)<br/>(1)</i> | <i>Mean height<br/>of the antenna<br/>(m)<br/>(2)</i> | <i>Distance<br/>of the contour of<br/>250 <math>\mu\text{V}/\text{m}</math><br/>F (50,50)<br/>(km)<br/>(3)</i> |
|--------------|--|---|--|
| I .....      | 100 (20 dBk)   | 150   | 85   |
| II .....     | 25 (14 dBk)  | 75  | 63   |
| III .....    | 5 (7 dBk)  | 30  | 25   |
| IV .....     | 1 (0 dBk)  | 30  | 20   |
| V .....      | 0,25 (- 6 dBk)   | 30  | 15   |

NOTE: Stations may use antenna inputs and heights which differ from those specified above provided that the resulting contours do not exceed those listed in column 3.

Table III. MINIMUM REQUIREMENTS

| Class     | Effective radiated power (ERP)<br>(kW)<br>(1) | Mean height of the antenna<br>(m)<br>(2) | Distance of the contour of 250 $\mu$ V/m F (50,50)<br>(km)<br>(3) |
|-----------|---|--|---|
| I .....   | Above 25 (14 dBk)                             | 75                                       | 63  |
| II .....  | Above 5 (7 dBk)                               | 30                                       | 25  |
| III ..... | Above 1 (0 dBk)                               | 30                                       | 20  |
| IV .....  | Above 0.25 (- 6 dBk)                          | 30                                       | 15  |

NOTE: Stations may use antenna inputs and heights which differ from those specified above provided that the resulting contours are not lower than those listed in column 3.

Class V stations do not have minimum requirements.

The effective radiated power and the mean antenna height must be chosen in such a way that, within the service area assigned to the corresponding channel of the other country, the protection ratios established in this Agreement are maintained.

For the purposes of this Agreement, it is considered that a directional radiating system cannot be reduced by more than fifteen dB (15 dB) with respect to its maximum radiation.

#### Article IX. CATEGORIES OF STATIONS

1. *High-power.* This category includes Class I stations.
2. *Medium-power.* This category includes Class II and III stations.
3. *Low-power.* This category includes Class IV and V stations.

#### Article X. PREDICTION OF FIELD STRENGTH CONTOURS

1. For the prediction of protected and interfering contours the graphs in figures 1 and 2 of appendix 2 shall be used. These graphs are drawn up on the basis of an effective radiated power of 1 kW with horizontal polarization and a receiving antenna 10 metres high.

2. To obtain from figures 1 and 2 of appendix 2 the distance at which a given field strength is produced, with an ERP other than 1 kW, account must be taken of the dB ratio between the input under consideration and the 1 kW input; it must then be subtracted from the field strength in dB $\mu$  for the height of the antenna under consideration.

3. The mean height of the transmitting antenna used in the predictions described in the foregoing paragraphs is the height of the radiating centre of the antenna above the mean land height. This level shall be determined in the area included between two circles of 3 and 15 km radius centred on the transmitting antenna. An average is taken of the heights along 8 radials spaced out equally, one of which shall follow the direction of the geographical north. The greatest possible number of heights shall be measured (with a minimum of 12 heights) along each radial. In each case sea level shall be zero. The mean height of the

antenna is the difference between the height of the radiating centre of the antenna and the mean height of land both with reference to zero height.

4. If the resulting distances are lower than the minimum values given in figures 1 and 2 of appendix 2, such distances shall be disregarded.

#### Article XI. SEPARATION BETWEEN STATIONS

1. Table IV gives the minimum separation necessary for stations whose maximum requirements are listed in table II of article VIII of this Agreement.

Table IV. SEPARATION REQUIRED BETWEEN STATIONS (KM)

| Category<br><br>Separation<br>in kHz | High-power as against low-power |                                    | High-power as against medium-power |            | Medium-power as against low-power    |            | Low-power as against low-power |            |            |
|--------------------------------------|---------------------------------|------------------------------------|------------------------------------|------------|--------------------------------------|------------|--------------------------------|------------|------------|
|                                      | High-power as against low-power | High-power as against medium-power | Channels                           |            | Medium-power as against medium-power | Channels   |                                | Channels   |            |
|                                      |                                 |                                    | 201 to 220                         | 291 to 300 |                                      | 201 to 220 | 291 to 300                     | 201 to 220 | 291 to 300 |
|                                      |                                 |                                    | —                                  | 330        |                                      | 323        | —                              | 280        | 124        |
| 0                                    | 395                             | 373                                | —                                  | 330        | 323                                  | —          | 280                            | 124        | 182        |
| ± 200                                | 230                             | 208                                | 165                                | 165        | 163                                  | 120        | 120                            | 45         | 53         |
| ± 400                                | 134                             | 111                                | 92                                 | 85         | 87                                   | 70         | 63                             | 27         | 20         |
| ± 600                                | 85                              | 85                                 | 85                                 | 85         | 63                                   | 63         | 63                             | 20         | 20         |

2. The distances between stations listed in table IV are based on omnidirectional antennas.

#### Article XII. CHANNEL ASSIGNMENT SCHEDULE

1. Appendix 3 contains the channel assignment schedule for FM sound broadcasting service in the metric waves located in the coordination zone. It gives the assignments for each Administration and forms an integral part of this Agreement.

2. The assignments included in appendix 3 of this Agreement are based on omnidirectional antennas.

3. New assignments or modifications to the technical characteristics of stations covered by appendix 3 may be made, subject always to the provisions of this Agreement.

#### Article XIII. NOTIFICATION AND CONSULTATION PROCEDURE

1. Notification must be given of any new assignment or modification of the technical characteristics indicated in the model form appearing in appendix 4 with regard to the stations included in appendix 3. The notification must contain the data required in the model form and shall be sent to the Administration of the countries whose territories are included in the coordination zone of the transmitter in question.

2. A period of sixty (60) consecutive days shall be allowed for the Administration or Administrations notified to formulate their technical objections, as necessary, to the new assignment or modification. This period shall be reckoned,

depending on the means of communication used, from the date of the relevant confirmation of delivery (Instructions for the operation of the international public telegram service, 1977 ed., CCITT, Geneva, 1976, chap. XI, para. 4) or advice of delivery (Universal Postal Convention, Lausanne, 1974,<sup>1</sup> article 42).

3. If the Administration notified transmits an acknowledgement of receipt within ten (10) consecutive days after the date of the confirmation of delivery or advice of delivery, depending on the means of communication used, the period established in paragraph 2 of this article shall be reckoned from the date of receipt of the aforesaid acknowledgement of receipt.

4. If any technical objection is presented within the appropriate period, the new assignment or modification may not take place until an agreement has been reached with the objecting Administration or Administrations. Such agreement shall enter into force as of the exchange between the Administrations of notifications of approval. For the purposes of this Agreement, a "technical objection" shall be understood to mean an objection based on the technical criteria concerning channel assignments and tables of maximum and minimum requirements, established in this Agreement (articles IV, VII and VIII).

5. In the event that there is no technical objection, or upon expiry of the appropriate period mentioned in paragraph 2 or paragraph 3 of this article, the notifying Administration shall be authorized to make the notified new assignment or modification, subject always to the technical criteria established in this Agreement. Nevertheless, the notifying Administration shall officially bring the situation to the attention of the other Administrations, and shall provide the date indicated in the model form (appendix 4 of this Agreement).

6. If a station belonging to any of the Administrations causes harmful interference to any station of the other Administration within the service area limited by the contour of 250  $\mu\text{V}/\text{m}$ , the Administration of the station which considers itself interfered with, shall notify the other Administration, indicating the technical characteristics and data stipulated in appendix 8 to the Radio Regulations, Geneva, 1976 or to the corresponding provision of the Radio Regulations in force.<sup>2</sup> In this case, the Administration responsible must immediately take the necessary steps to eliminate the harmful interference.

7. When the stations included in appendix 3 of this Agreement are equipped with directional antennas, the Administrations shall undertake to give notification of this fact in conformity with the model form in appendix 4 of this Agreement.

#### *Article XIV.* CO-OPERATION AND ROUTINE EXCHANGE OF INFORMATION

With the aim of establishing a system of routine consultations, the Governments undertake, through their respective Administrations, to exchange information and co-operate with each other in order to reduce harmful interference to a minimum and achieve maximum efficiency in the use of the radio spectrum.

#### *Article XV.* PERIODIC MEETINGS

1. With a view to resolving by common accord such problems as may arise in connection with the execution of this Agreement, the Governments agree that their respective Administrations shall hold meetings at regular intervals of two (2) years at venues rotating among the countries; the meetings shall be

<sup>1</sup> United Nations, *Treaty Series*, vol. 1005, p. 53.

<sup>2</sup> International Telecommunications Union, *Radio Regulations*, Geneva, 1959.



preceded by an exchange of the relevant information at least fifteen (15) days in advance.

2. Notwithstanding the period called for in paragraph 1 of this article and in order to verify fulfilment of this Agreement, the Governments agree that their respective Administrations shall hold the first meeting within one (1) year after the entry into force of this Agreement in the country whose turn it is under the system of rotation established in paragraph 1. That country shall issue the necessary invitations three (3) months in advance.

*Article XVI.* NOTIFICATIONS AND EXCHANGE OF CORRESPONDENCE

All the notifications referred to in article XIII and exchanges of correspondence which take place by virtue of this Agreement shall be addressed to the respective Administration of each Government at the following addresses, which shall be deemed valid until altered by formal communication.

Administration of the Argentine Republic:

Secretaría de Estado de Comunicaciones  
Dirección Nacional de Telecomunicaciones  
Sarmiento 151, 4° Piso.  
Telephone: 33-7385/30-8052  
Telex: 21706 SECOM AR  
1.000—Capital Federal—Republica Argentina

Administration of the Federal Republic of Brazil:

Ministério das Comunicações  
Secretaria Geral  
Secretaria de Assuntos Internacionais  
Esplanada dos Ministérios, Bloco R, 6° andar  
70.044 Brasília, DF—Brasil  
Telephone: (61) 223-4992  
Telex: (61) 1994/611994 MNCO BR

Administration of the Eastern Republic of Uruguay:

Administración Nacional de Telecomunicaciones (ANTEL)  
División Control Servicios Radioeléctricos  
Calle Sarandí 472  
Montevideo, Uruguay  
Telephone: 917783/908152  
Telex: UY 850

*Article XVII.* TRANSITIONAL PROVISION

The Governments undertake to make continuing efforts to ensure that their respective national plans for FM sound broadcasting in the metric wave bands conform to the provisions of this Agreement.

*Article XVIII.* PROVISIONAL APPLICATION

This Agreement shall be applied provisionally from the date of its signature until its entry into force or until two Parties give notification of their intention not to become party thereto.

*Article XIX.* ENTRY INTO FORCE

This Agreement shall enter into force, without prejudice to the provisions of article XVIII, on the date when the Ministry of Foreign Affairs of the Federative Republic of Brazil notifies the signatory States that the second instrument of ratification has been deposited.

*Article XX.* DENUNCIATION

This Agreement may be denounced by any of the Parties through written notification addressed to the depositary, and shall cease to have effect as of the 180th day following the notification of the denunciation to the Parties. Denunciation by one party shall not affect the validity of the Agreement between the remaining parties.

*Article XXI.* AMENDMENTS

This Agreement may be amended in whole or in part by common accord among all the Parties. Amendments shall enter into force when all Parties have received their respective notifications of approval.

DONE in Montevideo, on 8 July 1980, in one original copy, in the Portuguese and Spanish languages, both texts being equally authentic; the texts shall be deposited with the Ministry of Foreign Affairs of the Federative Republic of Brazil.

For the Government of the Argentine Republic:

[EDUARDO OSCAR CORRADO]

For the Government of the Federative Republic of Brazil:

[HAROLDO CORRÊA DE MATTOS]

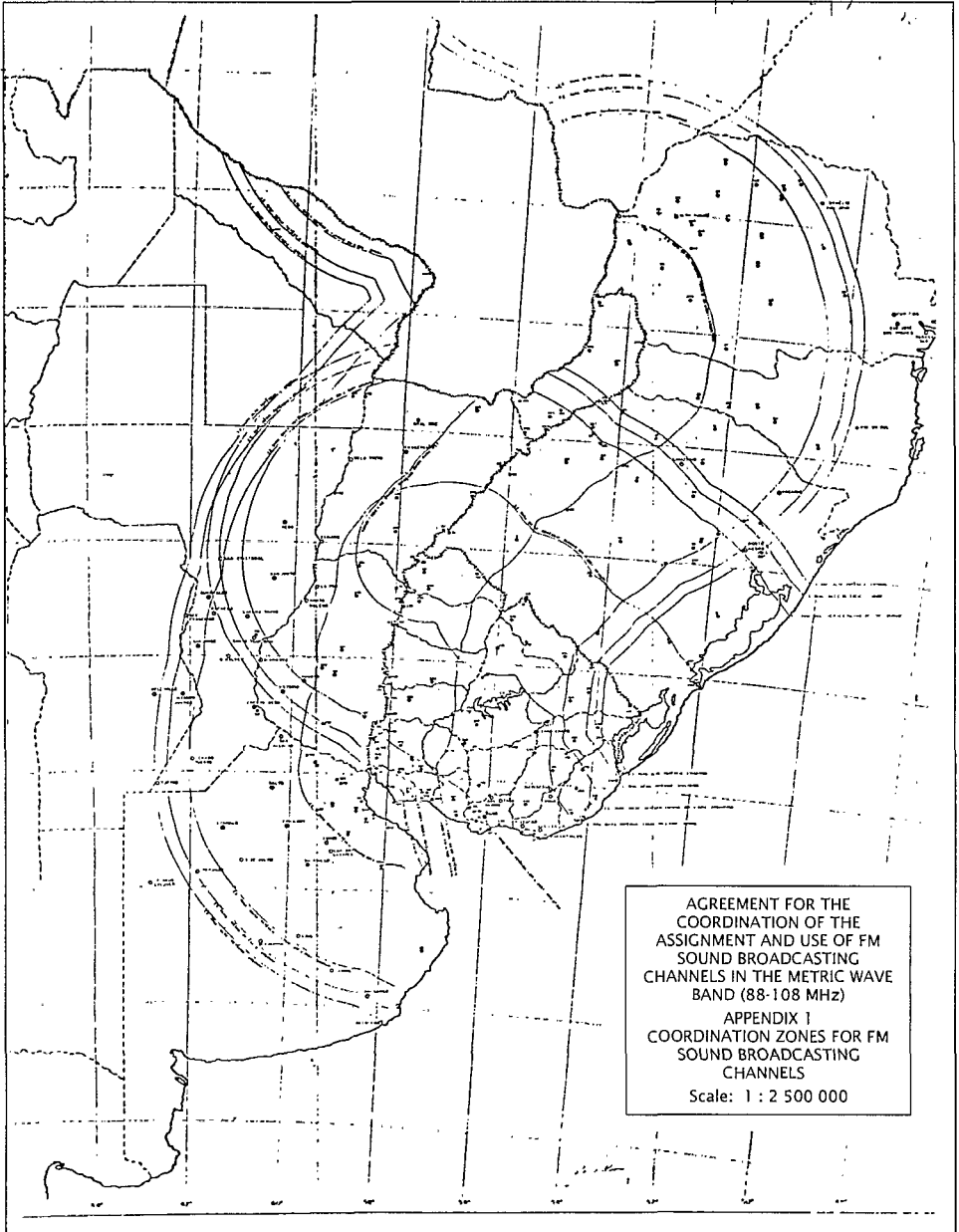
For the Government of the Eastern Republic of Uruguay:

[WALTER RAVENNA]

[JUAN F. MÍGUEZ]

## APPENDIX 1

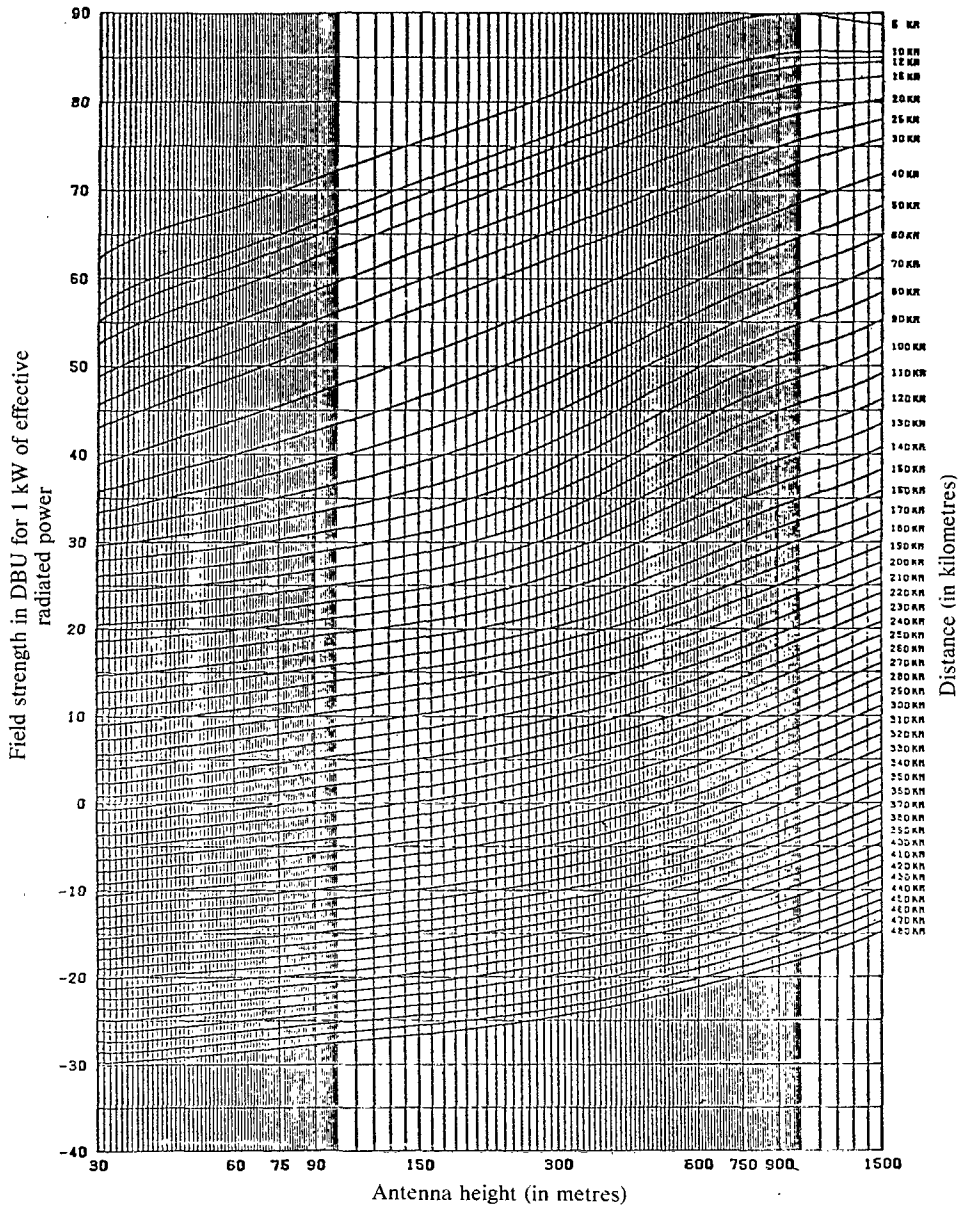
*Map corresponding to appendix 1 as a separate annex*



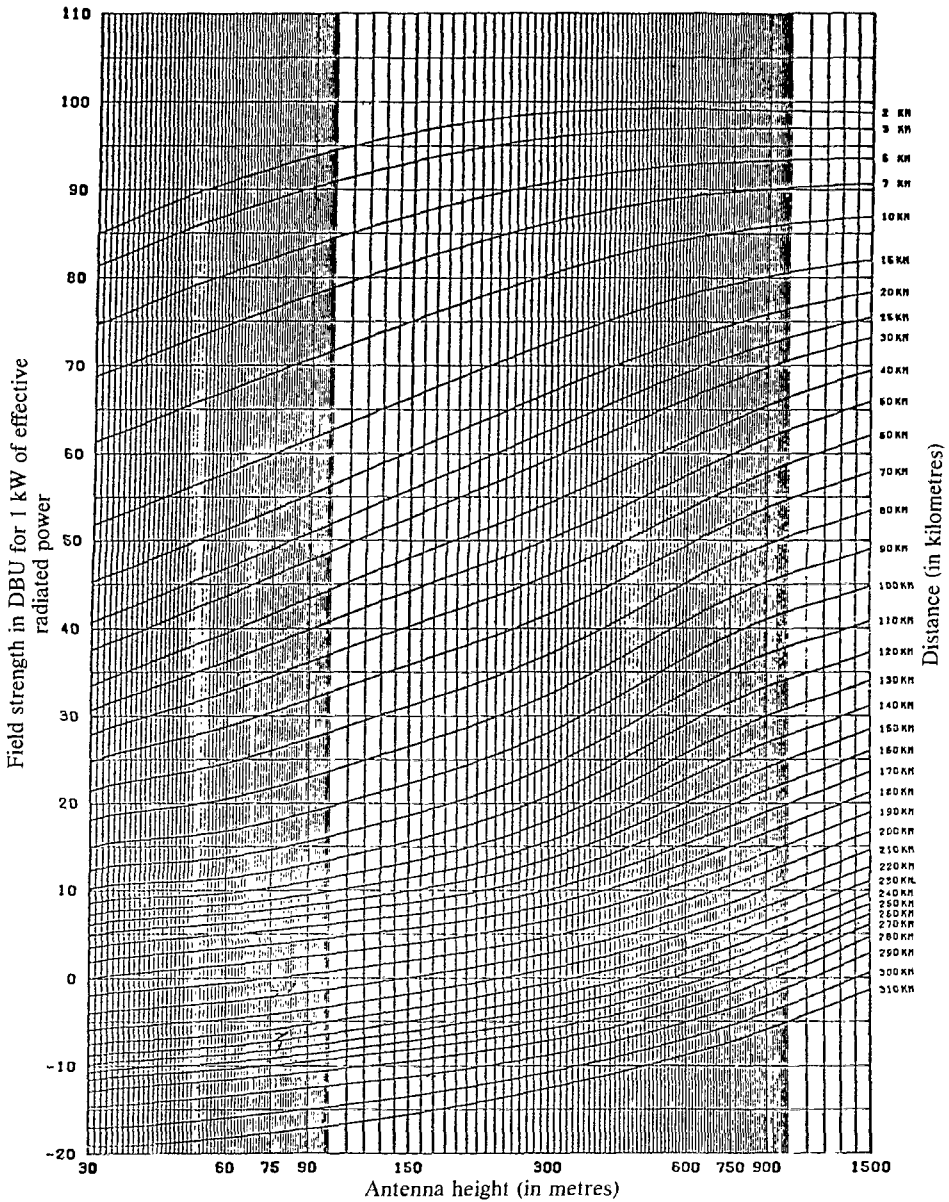
Scale after reduction: 1 : 4 300 000

APPENDIX 2

Graphs—F(50.10) for FM channels



Graphs—F(50,50) for FM channels



## APPENDIX 3

## ASSIGNMENT OF CHANNELS AND CLASSES

| No.<br>map loc. | Channel | Class | Locations                |                   |                | Geographical coordinates |           |
|-----------------|---------|-------|--------------------------|-------------------|----------------|--------------------------|-----------|
|                 |         |       | Argentina                | Brasil            | Uruguay        | Latitude                 | Longitude |
| 77.....         | 201     | IV    | Chascomús (BA)           |                   |                | 35°34' S                 | 58°02' W  |
| 104.....        | 201     | IV    | Zárate (BA)              |                   |                | 34°06' S                 | 59°02' W  |
| 280.....        | 201     | IV    | Federal (ER)             |                   |                | 30°55' S                 | 58°46' W  |
| 141.....        | 201     | IV    | Rosario del Tala<br>(ER) |                   |                | 32°18' S                 | 59°09' W  |
| 150.....        | 201     | IV    | Monte Caseros<br>(CTES)  |                   |                | 30°15' S                 | 57°38' W  |
| 253.....        | 201     | IV    | Apóstoles (MNES)         |                   |                | 27°54' S                 | 55°45' W  |
| 23.....         | 201     | IV    |                          | Santo Ângelo (RS) |                | 28°18' S                 | 54°16' W  |
| 160.....        | 202     | V     |                          |                   | Solymar        | 34°49' S                 | 55°55' W  |
| 161.....        | 202     | IV    |                          |                   | Rocha          | 34°28' S                 | 54°20' W  |
| 162.....        | 202     | IV    |                          |                   | Nueva Helvecia | 34°17' S                 | 57°13' W  |
| 163.....        | 202     | V     |                          |                   | J. P. Varela   | 33°27' S                 | 54°31' W  |
| 164.....        | 202     | IV    |                          |                   | Fray Bentos    | 33°07' S                 | 58°18' W  |
| 165.....        | 202     | IV    |                          |                   | Salto          | 31°23' S                 | 57°58' W  |
| 166.....        | 202     | IV    |                          |                   | Artigas        | 30°25' S                 | 56°29' W  |
| 147.....        | 203     | IV    | Curuzú Cuatiá<br>(CTES)  |                   |                | 29°47' S                 | 58°03' W  |
| 167.....        | 203     | IV    |                          |                   | Rivera         | 30°54' S                 | 55°32' W  |
| 168.....        | 203     | IV    |                          |                   | Paysandú       | 32°19' S                 | 58°04' W  |
| 171.....        | 203     | V     |                          |                   | Libertad       | 34°38' S                 | 56°37' W  |
| 172.....        | 203     | V     |                          |                   | Conchillas     | 34°11' S                 | 58°00' W  |
| 263.....        | 203     | IV    | San Javier (MNES)        |                   |                | 27°53' S                 | 55°08' W  |
| 134.....        | 204     | IV    | Chajarí (ER)             |                   |                | 30°45' S                 | 57°59' W  |
| 136.....        | 204     | IV    | Gualeduay (ER)           |                   |                | 33°09' S                 | 59°20' W  |
| 144.....        | 204     | IV    | Villaguay (ER)           |                   |                | 31°52' S                 | 59°01' W  |
| 2.....          | 204     | IV    |                          | Alegrete (RS)     |                | 29°46' S                 | 55°46' W  |
| 174.....        | 204     | V     |                          |                   | Vergara        | 32°58' S                 | 53°56' W  |
| 175.....        | 204     | V     |                          |                   | Palmitas       | 33°29' S                 | 57°47' W  |
| 77.....         | 205     | IV    | Chascomús (BA)           |                   |                | 35°34' S                 | 58°02' W  |
| 86.....         | 205     | IV    | Luján (BA)               |                   |                | 34°34' S                 | 59°06' W  |
| 54.....         | 205     | IV    |                          | Palotina (PR)     |                | 24°17' S                 | 53°51' W  |
| 176.....        | 205     | IV    |                          |                   | Tacuarembó     | 31°42' S                 | 55°59' W  |
| 178.....        | 205     | V     |                          |                   | Lascano        | 33°41' S                 | 54°13' W  |
| 21.....         | 206     | IV    |                          | Santa Rosa (RS)   |                | 27°52' S                 | 54°29' W  |
| 180.....        | 206     | IV    |                          |                   | Nueva Palmira  | 33°53' S                 | 58°25' W  |
| 181.....        | 206     | IV    |                          |                   | T. Gomensoro   | 30°27' S                 | 57°29' W  |
| 183.....        | 206     | V     |                          |                   | Juan Lacaze    | 34°25' S                 | 57°25' W  |
| 100.....        | 207     | IV    | San Pedro (BA)           |                   |                | 33°42' S                 | 59°41' W  |
| 133.....        | 207     | IV    | Concordia (ER)           |                   |                | 31°24' S                 | 58°01' W  |
| 254.....        | 207     | IV    | L. N. Alem<br>(MNES)     |                   |                | 27°36' S                 | 55°19' W  |
| 167.....        | 207     | IV    |                          |                   | Rivera         | 30°54' S                 | 55°32' W  |
| 185.....        | 207     | IV    |                          |                   | Chuy           | 33°41' S                 | 53°27' W  |
| 186.....        | 207     | V     |                          |                   | Mercedes       | 33°15' S                 | 58°01' W  |
| 131.....        | 208     | IV    | Colón (ER)               |                   |                | 32°14' S                 | 58°08' W  |
| 44.....         | 208     | IV    |                          | Cascavel (PR)     |                | 24°57' S                 | 53°28' W  |
| 188.....        | 208     | IV    |                          |                   | F. Muerto      | 32°32' S                 | 54°31' W  |
| 190.....        | 208     | V     |                          |                   | J. E. Rodó     | 33°40' S                 | 57°33' W  |
| 191.....        | 208     | V     |                          |                   | San José       | 34°22' S                 | 56°42' W  |
| 134.....        | 209     | IV    | Chajarí (ER)             |                   |                | 30°45' S                 | 57°59' W  |
| 260.....        | 209     | IV    | Ituzaingó (CTES)         |                   |                | 27°35' S                 | 56°41' W  |

| No.<br>map loc. | Channel | Class | Locations                      |                           |                      | Geographical coordinates |           |
|-----------------|---------|-------|--------------------------------|---------------------------|----------------------|--------------------------|-----------|
|                 |         |       | Argentina                      | Brasil                    | Uruguay              | Latitude                 | Longitude |
| 192.....        | 209     | IV    |                                |                           | Río Branco           | 32°35' S                 | 53°23' W  |
| 193.....        | 209     | V     |                                |                           | Dolores              | 33°32' S                 | 58°13' W  |
| 266.....        | 210     | IV    |                                | Girúá (RS)                |                      | 28°01' S                 | 54°21' W  |
| 255.....        | 210     | IV    | Bdo. de Irigoyen<br>(MNES)     |                           |                      | 26°15' S                 | 53°37' W  |
| 196.....        | 210     | IV    |                                |                           | San Javier           | 32°40' S                 | 58°08' W  |
| 197.....        | 210     | IV    |                                |                           | Rosario              | 34°16' S                 | 57°19' W  |
| 104.....        | 211     | IV    | Zárate (BA)                    |                           |                      | 34°06' S                 | 59°02' W  |
| 141.....        | 211     | IV    | Rosario del Tala<br>(ER)       |                           |                      | 32°18' S                 | 59°09' W  |
| 281.....        | 211     | IV    | San José de<br>Feliciano (ER)  |                           |                      | 30°23' S                 | 58°45' W  |
| 199.....        | 211     | V     |                                |                           | Santa Lucía          | 34°28' S                 | 56°23' W  |
| 137.....        | 212     | IV    | Gualeguaychú<br>(ER)           |                           |                      | 33°01' S                 | 58°31' W  |
| 160.....        | 212     | V     |                                |                           | Solymar              | 34°49' S                 | 55°55' W  |
| 201.....        | 212     | V     |                                |                           | Cardona              | 33°52' S                 | 57°22' W  |
| 88.....         | 213     | V     | Mercedes (BA)                  |                           |                      | 34°39' S                 | 59°26' W  |
| 131.....        | 213     | IV    | Colón (ER)                     |                           |                      | 32°14' S                 | 58°08' W  |
| 279.....        | 213     | IV    | Federación (ER)                |                           |                      | 31°00' S                 | 57°53' W  |
| 136.....        | 213     | IV    | Gualeguay (ER)                 |                           |                      | 33°09' S                 | 59°20' W  |
| 204.....        | 213     | IV    |                                |                           | Velázquez            | 34°02' S                 | 54°16' W  |
| 21.....         | 214     | IV    |                                | Santa Rosa (RS)           |                      | 27°52' S                 | 54°29' W  |
| 35.....         | 214     | IV    |                                | Chapecó (SC)              |                      | 27°06' S                 | 52°36' W  |
| 205.....        | 214     | V     |                                |                           | E. Paullier          | 34°22' S                 | 57°08' W  |
| 206.....        | 214     | V     |                                |                           | Ombues de<br>Lavalle | 33°57' S                 | 57°47' W  |
| 208.....        | 214     | V     |                                |                           | N. Berlín            | 32°57' S                 | 58°03' W  |
| 86.....         | 215     | V     | Luján (BA)                     |                           |                      | 34°34' S                 | 59°06' W  |
| 144.....        | 215     | IV    | Villaguay (ER)                 |                           |                      | 31°52' S                 | 59°01' W  |
| 256.....        | 215     | IV    | El Soberbio<br>(MNES)          |                           |                      | 27°18' S                 | 54°12' W  |
| 259.....        | 215     | IV    | Alvear (CTES)                  |                           |                      | 29°06' S                 | 56°33' W  |
| 210.....        | 215     | V     |                                |                           | Soriano              | 33°24' S                 | 58°19' W  |
| 69.....         | 216     | IV    | Baradero (BA)                  |                           |                      | 33°49' S                 | 59°30' W  |
| 213.....        | 216     | V     |                                |                           | Joaquín Suárez       | 34°16' S                 | 57°36' W  |
| 132.....        | 217     | IV    | Concepción del<br>Uruguay (ER) |                           |                      | 32°29' S                 | 58°14' W  |
| 73.....         | 218     | V     | Cañuelas (BA)                  |                           |                      | 35°03' S                 | 58°46' W  |
| 214.....        | 218     | V     |                                |                           | La Paz (CP)          | 34°22' S                 | 57°19' W  |
| 215.....        | 218     | V     |                                |                           | Agraciada            | 33°43' S                 | 58°15' W  |
| 267.....        | 219     | IV    |                                | Tuparendi (RS)            |                      | 27°45' S                 | 54°30' W  |
| 35.....         | 219     | IV    |                                | Chapecó (SC)              |                      | 27°06' S                 | 52°36' W  |
| 282.....        | 219     | IV    | Macia (ER)                     |                           |                      | 32°11' S                 | 59°24' W  |
| 72.....         | 219     | IV    | Campana (BA)                   |                           |                      | 34°10' S                 | 58°57' W  |
| 216.....        | 219     | IV    |                                |                           | Pirarajá             | 33°45' S                 | 54°45' W  |
| 23.....         | 220     | IV    |                                | Santo Ângelo (RS)         |                      | 28°18' S                 | 54°16' W  |
| 100.....        | 220     | IV    | San Pedro (BA)                 |                           |                      | 33°42' S                 | 59°41' W  |
| 18.....         | 221     | II    |                                | Santa Cruz do Sul<br>(RS) |                      | 29°42' S                 | 52°25' W  |
| 48.....         | 221     | II    |                                | Guarapuava (PR)           |                      | 25°23' S                 | 51°28' W  |
| 146.....        | 221     | I     | Corrientes                     |                           |                      | 27°28' S                 | 58°50' W  |
| 186.....        | 221     | II    |                                |                           | Mercedes             | 33°15' S                 | 58°01' W  |
| 4.....          | 222     | II    |                                | Bento Gonçalves<br>(RS)   |                      | 29°10' S                 | 51°31' W  |
| 10.....         | 222     | II    |                                | Cruz Alta (RS)            |                      | 28°38' S                 | 53°36' W  |

| No.<br>map loc. | Channel | Class | Locations                 |                        |                | Geographical coordinates |           |
|-----------------|---------|-------|---------------------------|------------------------|----------------|--------------------------|-----------|
|                 |         |       | Argentina                 | Brasil                 | Uruguay        | Latitude                 | Longitude |
| 37.....         | 222     | II    |                           | Joaçaba (SC)           |                | 27°10' S                 | 51°30' W  |
| 56.....         | 222     | II    |                           | Paranavaí (PR)         |                | 23°04' S                 | 52°31' W  |
| 173.....        | 222     | II    |                           |                        | Florida        | 34°05' S                 | 56°12' W  |
| 13.....         | 223     | I     |                           | Porto Alegre (RS)      |                | 30°02' S                 | 51°13' W  |
| 273.....        | 223     | II    |                           | Quedas do Iguaçu (PR)  |                | 25°27' S                 | 52°55' W  |
| 63.....         | 223     | II    |                           | Umuarama (PR)          |                | 23°46' S                 | 53°18' W  |
| 80.....         | 223     | II    | General Madariaga (BA)    |                        |                | 37°00' S                 | 57°08' W  |
| 119.....        | 223     | I     | Santa Fe                  |                        |                | 31°39' S                 | 60°43' W  |
| 176.....        | 223     | II    |                           |                        | Tacuarembó     | 31°42' S                 | 55°59' W  |
| 41.....         | 224     | II    |                           | Apucarana (PR)         |                | 23°34' S                 | 51°28' W  |
| 42.....         | 224     | II    |                           | Arapongas (PR)         |                | 23°25' S                 | 51°26' W  |
| 44.....         | 224     | II    |                           | Cascavel (PR)          |                | 24°57' S                 | 53°28' W  |
| 57.....         | 224     | II    |                           | Pato Branco (PR)       |                | 26°13' S                 | 52°40' W  |
| 59.....         | 224     | II    |                           | Ponta Grossa (PR)      |                | 25°05' S                 | 50°09' W  |
| 64.....         | 224     | I     | Capital Federal           |                        |                | 34°38' S                 | 58°28' W  |
| 151.....        | 224     | I     | Paso de los Libres (CTES) |                        |                | 29°43' S                 | 57°05' W  |
| 219.....        | 224     | II    |                           |                        | Treinta y Tres | 33°13' S                 | 54°23' W  |
| 18.....         | 225     | II    |                           | Santa Cruz do Sul (RS) |                | 29°42' S                 | 52°25' W  |
| 45.....         | 225     | II    |                           | Cianorte (PR)          |                | 23°37' S                 | 52°36' W  |
| 61.....         | 225     | II    |                           | Telémaco Borba (PR)    |                | 24°20' S                 | 50°38' W  |
| 132.....        | 225     | III   | C. del Uruguay (ER)       |                        |                | 32°29' S                 | 58°14' W  |
| 10.....         | 226     | II    |                           | Cruz Alta (RS)         |                | 28°38' S                 | 53°36' W  |
| 37.....         | 226     | II    |                           | Joaçaba (SC)           |                | 27°10' S                 | 51°30' W  |
| 129.....        | 226     | I     | Clorinda (FSA)            |                        |                | 25°17' S                 | 57°43' W  |
| 220.....        | 226     | I     |                           |                        | Las Piedras    | 34°43' S                 | 56°12' W  |
| 63.....         | 227     | II    |                           | Umuarama (PR)          |                | 23°46' S                 | 53°18' W  |
| 87.....         | 227     | II    | Mar del Plata (BA)        |                        |                | 38°00' S                 | 57°34' W  |
| 140.....        | 227     | II    | Paraná (ER)               |                        |                | 31°44' S                 | 60°32' W  |
| 9.....          | 228     | I     |                           | Caxias do Sul (RS)     |                | 29°11' S                 | 51°12' W  |
| 19.....         | 228     | I     |                           | Santa Maria (RS)       |                | 29°41' S                 | 53°48' W  |
| 42.....         | 228     | II    |                           | Arapongas (PR)         |                | 23°25' S                 | 51°26' W  |
| 57.....         | 228     | II    |                           | Pato Branco (PR)       |                | 26°13' S                 | 52°40' W  |
| 41.....         | 228     | II    |                           | Apucarana (PR)         |                | 23°34' S                 | 51°28' W  |
| 221.....        | 228     | I     |                           |                        | Carmelo        | 34°00' S                 | 58°17' W  |
| 185.....        | 228     | II    |                           |                        | Chuy           | 33°41' S                 | 53°27' W  |
| 149.....        | 228     | I     | Mercedes (CTES)           |                        |                | 29°11' S                 | 58°04' W  |
| 283.....        | 229     | II    |                           | Pelotas (RS)           |                | 31°45' S                 | 52°19' W  |
| 45.....         | 229     | II    |                           | Cianorte (PR)          |                | 23°37' S                 | 52°36' W  |
| 167.....        | 230     | I     |                           |                        | Rivera         | 30°54' S                 | 55°32' W  |
| 222.....        | 230     | I     |                           |                        | Montevideo     | 34°54' S                 | 56°11' W  |
| 13.....         | 231     | I     |                           | Porto Alegre (RS)      |                | 30°02' S                 | 51°13' W  |
| 56.....         | 231     | II    |                           | Paranavaí (PR)         |                | 23°04' S                 | 52°31' W  |
| 119.....        | 231     | I     | Santa Fe                  |                        |                | 31°39' S                 | 60°43' W  |
| 130.....        | 231     | I     | Formosa                   |                        |                | 26°11' S                 | 58°11' W  |
| 19.....         | 232     | I     |                           | Santa Maria (RS)       |                | 29°41' S                 | 53°48' W  |
| 38.....         | 232     | I     |                           | Lajes (SC)             |                | 27°48' S                 | 50°19' W  |
| 64.....         | 232     | I     | Capital Federal           |                        |                | 34°38' S                 | 58°28' W  |
| 272.....        | 232     | I     | Las Lomitas (FSA)         |                        |                | 24°43' S                 | 60°36' W  |
| 219.....        | 232     | II    |                           |                        | Treinta y Tres | 33°13' S                 | 54°23' W  |
| 223.....        | 232     | II    |                           |                        | Belén          | 30°48' S                 | 57°50' W  |



| No.<br>map loc. | Channel | Class | Locations |                         |                               | Geographical coordinates |                   |
|-----------------|---------|-------|-----------|-------------------------|-------------------------------|--------------------------|-------------------|
|                 |         |       | Argentina | Brasil                  | Uruguay                       | Latitude                 | Longitude         |
| 283             | .....   | 233   | I         |                         | Pelotas (RS)                  |                          | 31°45' S 52°19' W |
| 41              | .....   | 233   | I         |                         | Apucarana (PR)                |                          | 23°34' S 51°28' W |
| 59              | .....   | 234   | I         |                         | Ponta Grossa (PR)             |                          | 25°05' S 50°09' W |
| 156             | .....   | 234   | I         | Puerto Iguazú<br>(MNES) |                               |                          | 25°36' S 54°34' W |
| 166             | .....   | 234   | I         |                         |                               | Artigas                  | 30°25' S 56°29' W |
| 222             | .....   | 234   | I         |                         |                               | Montevideo               | 34°53' S 56°10' W |
| 13              | .....   | 235   | I         |                         | Porto Alegre (RS)             |                          | 30°02' S 51°13' W |
| 119             | .....   | 235   | I         | Santa Fé                |                               |                          | 31°39' S 60°43' W |
| 224             | .....   | 235   | II        |                         |                               | Guichón                  | 32°22' S 57°13' W |
| 19              | .....   | 236   | II        |                         | Santa Maria (RS)              |                          | 29°41' S 53°48' W |
| 38              | .....   | 236   | II        |                         | Lajes (SC)                    |                          | 27°48' S 50°19' W |
| 64              | .....   | 236   | I         | Capital Federal         |                               |                          | 34°38' S 58°28' W |
| 178             | .....   | 236   | II        |                         |                               | Lascano                  | 33°41' S 54°13' W |
| 225             | .....   | 236   | III       |                         |                               | Constitución             | 31°03' S 57°50' W |
| 283             | .....   | 237   | I         |                         | Pelotas (RS)                  |                          | 31°45' S 52°19' W |
| 20              | .....   | 237   | II        |                         | Santana do<br>Livramento (RS) |                          | 30°53' S 55°31' W |
| 146             | .....   | 237   | I         | Corrientes              |                               |                          | 27°28' S 58°50' W |
| 53              | .....   | 238   | II        |                         | Maringá (PR)                  |                          | 23°23' S 51°56' W |
| 152             | .....   | 238   | II        | Santo Tomé<br>(CTES)    |                               |                          | 28°33' S 56°02' W |
| 222             | .....   | 238   | I         |                         |                               | Montevideo               | 34°51' S 56°10' W |
| 12              | .....   | 239   | II        |                         | Ijuí (RS)                     |                          | 28°23' S 53°54' W |
| 13              | .....   | 239   | I         |                         | Porto Alegre (RS)             |                          | 30°02' S 51°13' W |
| 140             | .....   | 239   | II        | Paraná (ER)             |                               |                          | 31°44' S 60°32' W |
| 150             | .....   | 239   | II        | Monte Caseros<br>(ER)   |                               |                          | 30°15' S 57°38' W |
| 227             | .....   | 239   | III       |                         |                               | Olimar                   | 32°54' S 54°56' W |
| 19              | .....   | 240   | II        |                         | Santa Maria (RS)              |                          | 29°41' S 53°48' W |
| 38              | .....   | 240   | II        |                         | Lajes (SC)                    |                          | 27°48' S 50°19' W |
| 64              | .....   | 240   | I         | Capital Federal         |                               |                          | 34°38' S 58°28' W |
| 87              | .....   | 240   | II        | Mar del Plata (BA)      |                               |                          | 38°00' S 57°34' W |
| 283             | .....   | 241   | II        |                         | Pelotas (RS)                  |                          | 31°45' S 52°19' W |
| 20              | .....   | 241   | II        |                         | Santana do<br>Livramento (RS) |                          | 30°53' S 55°31' W |
| 153             | .....   | 241   | I         | El Dorado (MNES)        |                               |                          | 26°26' S 54°41' W |
| 228             | .....   | 241   | III       |                         |                               | La Pedrera               | 34°35' S 54°07' W |
| 53              | .....   | 242   | II        |                         | Maringá (PR)                  |                          | 23°23' S 51°56' W |
| 168             | .....   | 242   | II        |                         |                               | Paysandú                 | 32°19' S 58°04' W |
| 222             | .....   | 242   | II        |                         |                               | Montevideo               | 34°54' S 56°11' W |
| 13              | .....   | 243   | I         |                         | Porto Alegre (RS)             |                          | 30°02' S 51°13' W |
| 229             | .....   | 243   | III       |                         |                               | J. Batlle y<br>Ordóñez   | 33°29' S 55°08' W |
| 19              | .....   | 244   | II        |                         | Santa Maria (RS)              |                          | 29°41' S 53°48' W |
| 38              | .....   | 244   | II        |                         | Lajes (SC)                    |                          | 27°48' S 50°19' W |
| 64              | .....   | 244   | I         | Capital Federal         |                               |                          | 34°38' S 58°28' W |
| 128             | .....   | 244   | I         | Resistencia (CHO)       |                               |                          | 27°27' S 59°00' W |
| 3               | .....   | 245   | II        |                         | Bagé (RS)                     |                          | 31°20' S 54°06' W |
| 31              | .....   | 245   | I         |                         | Uruguaiana (RS)               |                          | 29°45' S 57°04' W |
| 17              | .....   | 246   | I         |                         | Passo Fundo (RS)              |                          | 28°15' S 52°24' W |
| 284             | .....   | 246   | II        |                         | Rio Grande (RS)               |                          | 32°03' S 52°05' W |
| 53              | .....   | 246   | I         |                         | Maringá (PR)                  |                          | 23°23' S 51°56' W |
| 140             | .....   | 246   | II        | Paraná (ER)             |                               |                          | 31°44' S 60°32' W |
| 222             | .....   | 246   | I         |                         |                               | Montevideo               | 34°53' S 56°10' W |
| 59              | .....   | 247   | I         |                         | Ponta Grossa (PR)             |                          | 25°05' S 50°09' W |

| No.<br>map loc. | Channel | Class | Locations            |                       |                     | Geographical coordinates |           |
|-----------------|---------|-------|----------------------|-----------------------|---------------------|--------------------------|-----------|
|                 |         |       | Argentina            | Brasil                | Uruguay             | Latitude                 | Longitude |
| 133.....        | 247     | II    | Concordia (ER)       |                       |                     | 31°24' S                 | 58°01' W  |
| 174.....        | 247     | II    |                      |                       | Vergara             | 32°58' S                 | 53°56' W  |
| 13.....         | 248     | I     |                      | Porto Alegre (RS)     |                     | 30°02' S                 | 51°13' W  |
| 64.....         | 248     | I     | Capital Federal      |                       |                     | 34°38' S                 | 58°28' W  |
| 3.....          | 249     | II    |                      | Bagé (RS)             |                     | 31°20' S                 | 54°06' W  |
| 31.....         | 249     | II    |                      | Urugaiana (RS)        |                     | 29°45' S                 | 57°04' W  |
| 47.....         | 249     | I     |                      | Foz do Iguacu (PR)    |                     | 25°32' S                 | 54°35' W  |
| 17.....         | 250     | II    |                      | Passo Fundo (RS)      |                     | 28°15' S                 | 52°24' W  |
| 284.....        | 250     | II    |                      | Rio Grande (RS)       |                     | 32°03' S                 | 52°05' W  |
| 53.....         | 250     | I     |                      | Maringá (PR)          |                     | 23°23' S                 | 51°56' W  |
| 117.....        | 250     | I     | Rosario (SF)         |                       |                     | 32°57' S                 | 60°40' W  |
| 207.....        | 250     | I     |                      |                       | Punta del Este      | 34°55' S                 | 54°56' W  |
| 133.....        | 251     | II    | Concordia (ER)       |                       |                     | 31°24' S                 | 58°01' W  |
| 82.....         | 252     | I     | La Plata (BA)        |                       |                     | 34°55' S                 | 57°57' W  |
| 148.....        | 252     | I     | Goya (CTES)          |                       |                     | 29°08' S                 | 59°17' W  |
| 157.....        | 252     | I     | San Pedro (MNES)     |                       |                     | 26°38' S                 | 54°08' W  |
| 3.....          | 253     | II    |                      | Bagé (RS)             |                     | 31°20' S                 | 54°06' W  |
| 9.....          | 253     | I     |                      | Caxias do Sul (RS)    |                     | 29°11' S                 | 51°12' W  |
| 17.....         | 254     | II    |                      | Passo Fundo (RS)      |                     | 28°15' S                 | 52°24' W  |
| 284.....        | 254     | II    |                      | Rio Grande (RS)       |                     | 32°03' S                 | 52°05' W  |
| 137.....        | 254     | II    | Gualeguaychú (ER)    |                       |                     | 33°01' S                 | 58°31' W  |
| 155.....        | 254     | III   | Posadas (MNES)       |                       |                     | 27°22' S                 | 55°53' W  |
| 166.....        | 254     | I     |                      |                       | Artigas             | 30°25' S                 | 56°29' W  |
| 222.....        | 254     | II    |                      |                       | Montevideo          | 34°54' S                 | 56°11' W  |
| 51.....         | 255     | II    |                      | Londrina (PR)         |                     | 23°18' S                 | 51°09' W  |
| 130.....        | 255     | I     | Formosa              |                       |                     | 26°11' S                 | 58°11' W  |
| 64.....         | 256     | I     | Capital Federal      |                       |                     | 34°38' S                 | 58°28' W  |
| 149.....        | 256     | I     | Mercedes (CTES)      |                       |                     | 29°11' S                 | 58°04' W  |
| 231.....        | 256     | I     |                      |                       | Melo                | 32°22' S                 | 54°10' W  |
| 13.....         | 257     | I     |                      | Porto Alegre (RS)     |                     | 30°02' S                 | 51°13' W  |
| 5.....          | 258     | II    |                      | Cachoeira do Sul (RS) |                     | 30°02' S                 | 52°53' W  |
| 59.....         | 258     | II    |                      | Ponta Grossa (PR)     |                     | 25°05' S                 | 50°09' W  |
| 117.....        | 258     | I     | Rosario (SF)         |                       |                     | 32°57' S                 | 60°40' W  |
| 230.....        | 258     | II    |                      |                       | B. Brum             | 30°43' S                 | 57°22' W  |
| 222.....        | 258     | I     |                      |                       | Montevideo          | 34°54' S                 | 56°11' W  |
| 51.....         | 259     | II    |                      | Londrina (PR)         |                     | 23°18' S                 | 51°09' W  |
| 154.....        | 259     | I     | Oberá (MNES)         |                       |                     | 27°29' S                 | 55°07' W  |
| 17.....         | 260     | II    |                      | Passo Fundo (RS)      |                     | 28°15' S                 | 52°24' W  |
| 284.....        | 260     | I     |                      | Rio Grande (RS)       |                     | 32°03' S                 | 52°05' W  |
| 64.....         | 260     | I     | Capital Federal      |                       |                     | 34°38' S                 | 58°28' W  |
| 232.....        | 260     | II    |                      |                       | La Paloma           | 34°40' S                 | 54°09' W  |
| 233.....        | 261     | II    |                      |                       | Paso de los Toros   | 32°49' S                 | 56°29' W  |
| 167.....        | 262     | I     |                      |                       | Rivera              | 30°54' S                 | 55°32' W  |
| 186.....        | 262     | II    |                      |                       | Mercedes            | 33°15' S                 | 58°01' W  |
| 222.....        | 262     | II    |                      |                       | Montevideo          | 34°54' S                 | 56°11' W  |
| 13.....         | 263     | I     |                      | Porto Alegre (RS)     |                     | 30°02' S                 | 51°13' W  |
| 51.....         | 263     | II    |                      | Londrina (PR)         |                     | 23°18' S                 | 51°09' W  |
| 152.....        | 263     | I     | Santo Tomé (CTES)    |                       |                     | 28°33' S                 | 56°02' W  |
| 85.....         | 264     | I     | Lomas de Zamora (BA) |                       |                     | 34°46' S                 | 58°24' W  |
| 234.....        | 264     | II    |                      |                       | General E. Martínez | 33°14' S                 | 53°48' W  |

| No.<br>map loc. | Channel | Class | Locations                 |                       |                     | Geographical coordinates |           |
|-----------------|---------|-------|---------------------------|-----------------------|---------------------|--------------------------|-----------|
|                 |         |       | Argentina                 | Brasil                | Uruguay             | Latitude                 | Longitude |
| 235             | 264     | III   |                           |                       | Termas del Arapey   | 30°57' S                 | 57°32' W  |
| 5               | 265     | II    |                           | Cachoeira do Sul (RS) |                     | 30°02' S                 | 52°53' W  |
| 236             | 265     | II    |                           |                       | Maldonado           | 34°54' S                 | 54°57' W  |
| 154             | 266     | I     | Oberá (MNES)              |                       |                     | 27°29' S                 | 55°07' W  |
| 200             | 266     | II    |                           |                       | Durazno             | 33°22' S                 | 56°31' W  |
| 13              | 267     | I     |                           | Porto Alegre (RS)     |                     | 30°02' S                 | 51°13' W  |
| 51              | 267     | II    |                           | Londrina (PR)         |                     | 23°18' S                 | 51°09' W  |
| 119             | 267     | I     | Santa Fe                  |                       |                     | 31°39' S                 | 60°43' W  |
| 89              | 268     | I     | Morón (BA)                |                       |                     | 34°39' S                 | 58°38' W  |
| 128             | 268     | I     | Resistencia (CHO)         |                       |                     | 27°27' S                 | 59°00' W  |
| 237             | 268     | II    |                           |                       | Aceguá              | 31°53' S                 | 54°09' W  |
| 5               | 269     | II    |                           | Cachoeira do Sul (RS) |                     | 30°02' S                 | 52°53' W  |
| 271             | 269     | II    |                           |                       | Pampa               | 32°15' S                 | 56°13' W  |
| 222             | 270     | I     |                           |                       | Montevideo          | 34°54' S                 | 56°11' W  |
| 9               | 271     | II    |                           | Caxias do Sul (RS)    |                     | 29°11' S                 | 51°12' W  |
| 51              | 271     | I     |                           | Londrina (PR)         |                     | 23°18' S                 | 51°09' W  |
| 95              | 272     | I     | Quilmes (BA)              |                       |                     | 34°43' S                 | 58°15' W  |
| 146             | 272     | I     | Corrientes                |                       |                     | 27°28' S                 | 58°50' W  |
| 239             | 272     | II    |                           |                       | La Coronilla        | 33°51' S                 | 53°29' W  |
| 87              | 273     | II    | Mar del Plata (BA)        |                       |                     | 38°00' S                 | 57°34' W  |
| 238             | 273     | III   |                           |                       | San Gregorio        | 32°36' S                 | 55°49' W  |
| 117             | 274     | I     | Rosario (SF)              |                       |                     | 32°57' S                 | 60°40' W  |
| 151             | 274     | I     | Paso de los Libres (CTES) |                       |                     | 29°43' S                 | 57°05' W  |
| 240             | 274     | I     |                           |                       | Canelones           | 34°33' S                 | 56°16' W  |
| 51              | 275     | II    |                           | Londrina (PR)         |                     | 23°18' S                 | 51°09' W  |
| 241             | 275     | II    |                           |                       | Vichadero           | 31°46' S                 | 54°40' W  |
| 64              | 276     | I     | Capital Federal           |                       |                     | 34°38' S                 | 58°28' W  |
| 242             | 276     | II    |                           |                       | Castillos           | 34°11' S                 | 53°51' W  |
| 243             | 277     | III   |                           |                       | Carlos Reyles       | 33°03' S                 | 56°18' W  |
| 168             | 278     | II    |                           |                       | Paysandú            | 32°19' S                 | 58°04' W  |
| 244             | 278     | II    |                           |                       | Minas               | 34°22' S                 | 55°14' W  |
| 13              | 279     | I     |                           | Porto Alegre (RS)     |                     | 30°02' S                 | 51°13' W  |
| 51              | 279     | II    |                           | Londrina (PR)         |                     | 23°18' S                 | 51°09' W  |
| 176             | 279     | II    |                           |                       | Tacuarembó          | 31°42' S                 | 55°59' W  |
| 245             | 280     | I     |                           |                       | Colonia             | 34°28' S                 | 57°50' W  |
| 229             | 281     | II    |                           |                       | J. Batlle y Ordóñez | 33°29' S                 | 55°08' W  |
| 165             | 282     | II    |                           |                       | Salto               | 31°23' S                 | 57°58' W  |
| 247             | 282     | II    |                           |                       | Atlántida           | 34°46' S                 | 55°45' W  |
| 15              | 283     | II    |                           | Novo Hamburgo (RS)    |                     | 29°41' S                 | 51°07' W  |
| 27              | 283     | II    |                           | São Leopoldo (RS)     |                     | 29°45' S                 | 51°08' W  |
| 51              | 283     | II    |                           | Londrina (PR)         |                     | 23°18' S                 | 51°09' W  |
| 155             | 283     | I     | Posadas (MNES)            |                       |                     | 27°22' S                 | 55°53' W  |
| 248             | 283     | II    |                           |                       | Minas de Corrales   | 31°34' S                 | 55°29' W  |
| 59              | 284     | II    |                           | Ponta Grossa (PR)     |                     | 25°05' S                 | 50°09' W  |
| 246             | 284     | III   |                           |                       | 19 de Abril         | 34°23' S                 | 54°05' W  |
| 245             | 284     | I     |                           |                       | Colonia             | 34°28' S                 | 57°50' W  |
| 200             | 286     | II    |                           |                       | Durazno             | 33°22' S                 | 56°31' W  |
| 15              | 287     | II    |                           | Novo Hamburgo (RS)    |                     | 29°41' S                 | 51°07' W  |

| No.<br>map loc. | Channel | Class | Locations       |                            |                   | Geographical coordinates |           |
|-----------------|---------|-------|-----------------|----------------------------|-------------------|--------------------------|-----------|
|                 |         |       | Argentina       | Brasil                     | Uruguay           | Latitude                 | Longitude |
| 27.....         | 287     | II    |                 | São Leopoldo (RS)          |                   | 29°45' S                 | 51°08' W  |
| 51.....         | 287     | II    |                 | Londrina (PR)              |                   | 23°18' S                 | 51°09' W  |
| 250.....        | 287     | II    |                 |                            | Piriápolis        | 34°52' S                 | 55°16' W  |
| 64.....         | 288     | I     | Capital Federal |                            |                   | 34°38' S                 | 58°28' W  |
| 192.....        | 288     | I     |                 |                            | Río Branco        | 32°35' S                 | 53°23' W  |
| 251.....        | 288     | II    |                 |                            | Bella Unión       | 30°15' S                 | 57°36' W  |
| 47.....         | 289     | I     |                 | Foz do Iguaçu (PR)         |                   | 25°32' S                 | 54°35' W  |
| 249.....        | 289     | II    |                 |                            | Young             | 32°42' S                 | 57°38' W  |
| 17.....         | 290     | II    |                 | Passo Fundo (RS)           |                   | 28°15' S                 | 52°24' W  |
| 284.....        | 290     | II    |                 | Rio Grande (RS)            |                   | 32°03' S                 | 52°05' W  |
| 45.....         | 290     | II    |                 | Cianorte (PR)              |                   | 23°37' S                 | 52°36' W  |
| 57.....         | 290     | II    |                 | Pato Branco (PR)           |                   | 26°13' S                 | 52°40' W  |
| 222.....        | 290     | I     |                 |                            | Montevideo        | 34°54' S                 | 56°11' W  |
| 3.....          | 291     | IV    |                 | Bagé (RS)                  |                   | 31°20' S                 | 54°06' W  |
| 6.....          | 291     | IV    |                 | Camaquã (RS)               |                   | 30°51' S                 | 51°48' W  |
| 10.....         | 291     | IV    |                 | Cruz Alta (RS)             |                   | 28°38' S                 | 53°36' W  |
| 18.....         | 291     | IV    |                 | Santa Cruz do Sul (RS)     |                   | 29°43' S                 | 52°25' W  |
| 22.....         | 291     | IV    |                 | Santiago (RS)              |                   | 29°12' S                 | 54°52' W  |
| 25.....         | 291     | IV    |                 | São Borja (RS)             |                   | 28°39' S                 | 55°59' W  |
| 30.....         | 291     | IV    |                 | Três Passos (RS)           |                   | 27°28' S                 | 53°57' W  |
| 34.....         | 291     | IV    |                 | Campos Novos (SC)          |                   | 27°24' S                 | 51°13' W  |
| 35.....         | 291     | IV    |                 | Chapecó (SC)               |                   | 27°06' S                 | 52°36' W  |
| 50.....         | 291     | IV    |                 | Ivaiporã (PR)              |                   | 24°15' S                 | 51°44' W  |
| 56.....         | 291     | IV    |                 | Paranavaí (PR)             |                   | 23°04' S                 | 52°31' W  |
| 268.....        | 291     | IV    |                 | Goio Erê (PR)              |                   | 24°09' S                 | 53°01' W  |
| 233.....        | 291     | II    |                 |                            | Paso de los Toros | 32°49' S                 | 56°29' W  |
| 1.....          | 292     | IV    |                 | Lajeado (RS)               |                   | 29°26' S                 | 51°58' W  |
| 7.....          | 292     | IV    |                 | Canguçu (RS)               |                   | 31°23' S                 | 52°40' W  |
| 16.....         | 292     | IV    |                 | Palmeiras das Missões (RS) |                   | 27°53' S                 | 53°18' W  |
| 20.....         | 292     | IV    |                 | Santana do Livramento (RS) |                   | 30°53' S                 | 55°31' W  |
| 21.....         | 292     | IV    |                 | Santa Rosa (RS)            |                   | 27°52' S                 | 54°29' W  |
| 36.....         | 292     | IV    |                 | Concórdia (SC)             |                   | 27°13' S                 | 52°01' W  |
| 41.....         | 292     | IV    |                 | Apucarana (PR)             |                   | 23°34' S                 | 51°28' W  |
| 42.....         | 292     | IV    |                 | Arapongas (PR)             |                   | 23°25' S                 | 51°26' W  |
| 49.....         | 292     | IV    |                 | Iporã (PR)                 |                   | 23°59' S                 | 53°38' W  |
| 98.....         | 292     | I     | San Isidro (BA) |                            |                   | 34°29' S                 | 58°31' W  |
| 232.....        | 292     | II    |                 |                            | La Paloma         | 34°40' S                 | 54°09' W  |
| 11.....         | 293     | IV    |                 | Erechim (RS)               |                   | 27°37' S                 | 52°16' W  |
| 23.....         | 293     | IV    |                 | Santo Ângelo (RS)          |                   | 28°18' S                 | 54°16' W  |
| 29.....         | 293     | IV    |                 | Soledade (RS)              |                   | 28°49' S                 | 52°30' W  |
| 58.....         | 293     | IV    |                 | Pitanga (PR)               |                   | 24°45' S                 | 51°45' W  |
| 62.....         | 293     | IV    |                 | Ubiratã (PR)               |                   | 24°33' S                 | 52°59' W  |
| 165.....        | 293     | II    |                 |                            | Salto             | 31°23' S                 | 57°58' W  |
| 252.....        | 293     | III   |                 |                            | Sarandí del Yí    | 33°22' S                 | 55°37' W  |
| 8.....          | 294     | IV    |                 | Carazinho (RS)             |                   | 28°17' S                 | 52°47' W  |
| 269.....        | 294     | IV    |                 | Rio Pardo (RS)             |                   | 29°58' S                 | 52°22' W  |
| 26.....         | 294     | IV    |                 | São Gabriel (RS)           |                   | 30°20' S                 | 54°19' W  |
| 28.....         | 294     | IV    |                 | São Luiz Gonzaga (RS)      |                   | 28°24' S                 | 54°57' W  |
| 37.....         | 294     | IV    |                 | Joaçaba (SC)               |                   | 27°10' S                 | 51°30' W  |

| No.<br>map loc. | Channel | Class | Locations            |                          |             | Geographical coordinates |           |
|-----------------|---------|-------|----------------------|--------------------------|-------------|--------------------------|-----------|
|                 |         |       | Argentina            | Brasil                   | Uruguay     | Latitude                 | Longitude |
| 43.....         | 294     | IV    |                      | Campo Mourão (PR)        |             | 24°02' S                 | 52°22' W  |
| 52.....         | 294     | IV    |                      | Mal. Cândido Rondon (PR) |             | 24°34' S                 | 54°04' W  |
| 164.....        | 294     | II    |                      |                          | Fray Bentos | 33°07' S                 | 58°18' W  |
| 222.....        | 294     | II    |                      |                          | Montevideo  | 34°54' S                 | 56°11' W  |
| 4.....          | 295     | IV    |                      | Bento Gonçalves (RS)     |             | 29°10' S                 | 51°31' W  |
| 12.....         | 295     | IV    |                      | Ijuí (RS)                |             | 28°23' S                 | 53°54' W  |
| 270.....        | 295     | IV    |                      | Formosa (PR)             |             | 24°18' S                 | 53°20' W  |
| 231.....        | 295     | I     |                      |                          | Melo        | 32°22' S                 | 54°10' W  |
| 33.....         | 296     | IV    |                      | Venâncio Aires (RS)      |             | 29°35' S                 | 52°11' W  |
| 44.....         | 296     | IV    |                      | Cascavel (PR)            |             | 24°57' S                 | 53°28' W  |
| 117.....        | 296     | I     | Rosario (SF)         |                          |             | 32°57' S                 | 60°40' W  |
| 147.....        | 296     | I     | Curuzú Cuatiá (CTES) |                          |             | 29°47' S                 | 58°03' W  |
| 170.....        | 296     | II    |                      |                          | Trinidad    | 33°32' S                 | 56°53' W  |
| 155.....        | 297     | I     | Posadas (MNES)       |                          |             | 27°22' S                 | 55°53' W  |
| 226.....        | 297     | II    |                      |                          | Tranqueras  | 31°12' S                 | 55°45' W  |
| 244.....        | 297     | II    |                      |                          | Minas       | 34°22' S                 | 55°14' W  |
| 5.....          | 298     | II    |                      | Cachoeira do Sul (RS)    |             | 30°02' S                 | 52°53' W  |
| 53.....         | 298     | II    |                      | Maringá (PR)             |             | 23°23' S                 | 51°56' W  |
| 59.....         | 298     | II    |                      | Ponta Grossa (PR)        |             | 25°05' S                 | 50°09' W  |
| 82.....         | 298     | I     | La Plata (BA)        |                          |             | 34°55' S                 | 57°57' W  |
| 13.....         | 299     | II    |                      | Porto Alegre (RS)        |             | 30°02' S                 | 51°13' W  |
| 38.....         | 299     | II    |                      | Lajes (SC)               |             | 27°48' S                 | 50°19' W  |
| 48.....         | 299     | II    |                      | Guarapuava (PR)          |             | 25°23' S                 | 51°28' W  |
| 63.....         | 299     | II    |                      | Umuarama (PR)            |             | 23°46' S                 | 53°18' W  |
| 161.....        | 299     | II    |                      |                          | Rocha       | 34°28' S                 | 54°20' W  |
| 9.....          | 300     | II    |                      | Caxias do Sul (RS)       |             | 29°11' S                 | 51°12' W  |
| 283.....        | 300     | I     |                      | Pelotas (RS)             |             | 31°45' S                 | 52°19' W  |
| 19.....         | 300     | II    |                      | Santa Maria (RS)         |             | 29°41' S                 | 53°48' W  |
| 31.....         | 300     | IV    |                      | Uruguaiãna (RS)          |             | 29°45' S                 | 57°04' W  |
| 51.....         | 300     | II    |                      | Londrina (PR)            |             | 23°18' S                 | 51°09' W  |
| 117.....        | 300     | I     | Rosario (SF)         |                          |             | 32°57' S                 | 60°40' W  |
| 191.....        | 300     | II    |                      |                          | San José    | 34°22' S                 | 56°42' W  |

APPENDIX 4

MODEL FORM

To be used to notify the Administrations of a new frequency assignment, a modification of an existing assignment and characteristics of the stations included in the Appendix ..... in conformity with ..... Agreement.

- a) ..... Administration      b)  New assignment      c)  Modification of the characteristics of assignment      d)  Cancellation of an assignment      e) Notification  
 No.....  
 Date .....

..... MHz  
 Assigned frequency

.....  
 Date of entry into operation      3. .... Identification signal      4. .... Number of the transmitting station

| Location(s)<br>5a | Geographical coordinates |                | ERP (kW)<br>6a | Mah (m)<br>6b | Characteristics of the transmitting antenna |    |    |    |    | Hours of operation<br>8 | Additional information<br>9 |
|-------------------|--------------------------|----------------|----------------|---------------|---|----|----|----|----|-------------------------|-----------------------------|
|                   | Longitude<br>5b          | Latitude<br>5c |                |               | 7a  | 7b | 7c | 7d | 7e |                         |                             |
|                   |                          |                |                |               |   |    |    |    |    |                         |                             |

ERP: Effective radiated power  
 Mah: Mean antenna height

Omnidirectional antenna:

Directional antenna:

- 7a Average gain (dB)  
 7b Angle of opening of the lobe or lobes in the direction of the Administration to be notified.  
 7c Average antenna gain (dB) of the lobe or lobes in the direction of the Administration to be notified.  
 7d Maximum antenna gain (dB) in the direction of the Administration to be notified.  
 7e Azimuth of the gain mentioned in 7d with relation to north, on an hourly basis.

9b ..... Name and postal address } of the Administration  
 ..... Cable address }

Agreement ..... COORD/.....