No. 11237

UNITED STATES OF AMERICA
and
MEXICO

Agreement concerning radio broadcasting in the standard broadcasting band (535-1605 kHz) (with annexes and exchange of notes dated on 10 March 1967). Signed at Mexico City on 11 December 1968

Authentic texts: English and Spanish.

Registered by the United States of America on 4 August 1971.

ÉTATS-UNIS D'AMÉRIQUE
et
MEXIQUE

Accord relatif à la radiodiffusion sur ondes moyennes (535-1605 kHz) [avec annexes et échange de notes datées du 10 mars 1967]. Signé à Mexico le 11 décembre 1968

Textes authentiques: anglais et espagnol.

Enregistré par les États-Unis d'Amérique le 4 août 1971.

AGREEMENT[1] BETWEEN THE UNITED STATES OF AMERICA AND THE UNITED MEXICAN STATES CONCERNING RADIO BROADCASTING IN THE STANDARD BROADCASTING BAND (535-1605 kHz)

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[1] Came into force on 18 November 1970 by the exchange of the instruments of ratification, which took place at Washington, in accordance with article XVIII (A).

1. The Government of the United States of America and the Government of the United Mexican States, desirous of promoting in their respective countries, the orderly and most practicable use of the standard broadcasting band (535-1605 kHz) and in consideration of the fact that this objective may be attained through the adoption of provisions set forth in a common agreement, have appointed for that purpose their undersigned Plenipotentiaries, who, having communicated to each other their respective Full Powers, found to be in good and due form, have agreed as follows:

PART 1

PURPOSE AND SCOPE

Article I

PURPOSE

2. A. Each Contracting Party recognizes that the sovereign right of the other to use any of the channels in the standard broadcasting band is subject to the provisions of the International Telecommunication Convention[1] and other applicable international agreements. The Parties further recognize that, in the absence of technical resources permitting the elimination of objectionable interference of an international character, agreement between them is necessary in order that the operations of their respective broadcasting stations may conform to technical standards acceptable to both.

3. B. In exercise of their sovereign rights, the United States of America and the United Mexican States have previously concluded agreements under which the establishment of their respective installations and the development of their services in the standard broadcasting band have been possible. Both Contracting Parties agree that any installations and services they may mutually agree upon at the time this Agreement is concluded and any that may be accepted in the future under the procedure established in this Agreement, shall be the subject of appropriate protection in accordance with the provisions of this Agreement.

4. C. Both Parties declare that the equitable and effective use of the standard broadcasting band and the protection of the mutually accepted installations and services are primary objectives of their governments and that to this end they seek to obtain the best coordination of the various technical elements involved in the development of such installations and services.

5. D. For the purpose of attaining these objectives, both Contracting Parties subscribe to this Agreement which contains the provisions that are to govern relations between the United States of America and the United Mexican States for the use of the standard broadcasting band, and they agree to take such action as may be necessary to ensure the observance of those provisions by private and other operating agencies recognized and

[1] United Kingdom, *Treaty Series*, No. 74 (1961), Cmnd. 1484.

authorized by them to establish and operate broadcasting stations in their respective territories in Region 2, as defined in the Radio Regulations (Geneva, 1959) [1] of the International Telecommunication Union.

Article II

SCOPE

6. The following Annexes complete and constitute an integral part of this Agreement:

Annex I: Table of clear channel priorities.
Annex II: Special use of clear channels.
Annex III: Table of shared clear channel priorities.
Annex IV: Class IV stations (Increase in power within the border zone).

Annex V: Specific cases (Other than the special cases contained in Annex II).

Annex VI: Summary of protected signals and interfering signals of the same channel.
Annex VII: Summary of protected signals and interfering signals between adjacent channels 10 kHz and 20 kHz apart.
Annex VIII: Angle of departure as a function of transmission range.
Annex IX: Example of computation of skywave signal strength.
Annex X: Skywave curves 10% and 50% of the time.
Annexe XI: Groundwave field strength curves as a function of distance.

Annex XII: Characteristic fields of vertical antennas.
Annex XIII: Kirke Method (equivalent distance) for computation of groundwave field strength.
Annex XIV: Maps of estimated effective ground conductivity.
Annex XV: Vertical plane radiation characteristics of omnidirectional vertical antennas.
Annex XVI: Joint Consultative Broadcasting Committee.

PART 2

DEFINITIONS, TERMINOLOGY AND SYMBOLS

Article III

DEFINITIONS AND TERMINOLOGY

7. The terms and expressions used in the present Agreement which are

[1] United States of America: *Treaties and Other International Acts Series* 4893.

not defined in this Part, are either defined in Article 1 of the Radio Regulations (Geneva, 1959) of the International Telecommunication Union and are used herein pursuant to such definitions, or are widely used and commonly accepted and are employed in this Agreement with their usual meanings.

8. *Broadcasting in the Standard Band*: A sound broadcasting service in that portion of the hectometric wave (medium frequency) band between 535 and 1605 kHz. The emissions in this service are intended for direct reception by the general public.

9. *Station*: A broadcasting station which operates in the standard broadcasting band.

10. *Broadcasting Channel*: The assigned frequency band for a station with the carrier frequency at the center.

11. *Clear Channel:* A channel designated for the operation of Class I-A and Class II stations only.

12. *Shared Clear Channel*: A channel designated for the operation of Class I-B and Class II stations only.

13. *Regional Channel*: A channel designated for the operation of Class III stations only.

14. *Local Channel*: A channel designated for the operation of Class IV stations only.

15. *Class I Station*: A station which operates on a clear channel or on a shared clear channel and is intended to render primary and secondary service over extensive areas and at relatively long distances. According to the extent of the areas to be protected, Class I stations are sub-categorized as Class I-A and Class I-B stations.

16. *Class I-A Station*: A Class I station that operates on a clear channel and has primary and secondary service areas protected by other stations on the same channel in accordance with the arrangements set forth in Part 5 and in Annexes I and II. The protection of its primary service area by other stations on adjacent channels is determined in accordance with the provisions of this Agreement.

17. *Class I-B Station*: A Class I station which operates on a shared clear channel and has a primary service area which is protected by other stations on the same and on adjacent channels, and a secondary service area which is protected by stations on the same channel in accordance with the provisions of this Agreement.

18. *Class II Station*: A station operating on a clear channel or on a shared clear channel and intended to provide primary service to an area which, depending on the geographic location and the power utilized by the station, may be relatively extensive, but is limited by and subject to interference from existing Class I and Class II stations. Under the provisions of this Agreement, its primary service area is afforded protection from objectionable interference resulting from all stations subsequently assigned on the same and on adjacent channels, and from modifications in the operating characteristics of existing stations on the same and on adjacent channels, with the exception of Class I-A stations on the same channel.

19. *Class III Station*: A station which operates on a regional channel and is intended to provide service principally to one or several important centers of population and to the rural area contiguous thereto. The service area is determined by application of the provisions of this Agreement.

20. *Class IV Station*: A station which operates on a local channel and is intended to provide service principally to one city or town and to the suburban areas contiguous thereto. The service area is determined by application of the provisions of this Agreement.

21. *Radiated Field Strength*: The strength of the field, corrected for absorption, produced by a station in a specific direction at a distance of 1 mile (1609 meters) from its antenna.

22. *Power*: The power of a station is the unmodulated power supplied to the antenna system and is determined in accordance with the method described in Part 4, Article IX, Section A.

23. *Protected Signal*: The signal determined by the value of the normally protected contour, or the signal appearing on a reduced contour at the point where protection of such signal is to be determined.

24. *Protection Ratio*: The ratio of the protected signal to the maximum permissible interfering signal.

25. *Necessary Bandwidth*: The minimum value of the occupied bandwidth sufficient to ensure the transmission of information of the required quality.

26. *Bandwidth*: Commonly used expression to designate the "necessary bandwidth".

27. *Groundwave*: A wave which is propagated along or close to the surface of the earth.

28. *Skywave (reflected wave):* A wave which is reflected by the ionosphere.

29. *Skywave (reflected wave) signal, 10% of the time*: The value of a skywave signal which is not exceeded for more than 10% of the period of observation.

30. *Skywave (reflected wave) signal, 50% of the time*: The value of a skywave signal which is not exceeded for more than 50% of the period of observation.

31. *Characteristic Field*: The field strength, corrected for absorption, of a groundwave signal radiated by a station when the power fed into an omnidirectional antenna is 1 kW and the reference distance is 1 mile (1609 meters).

32. *Antenna Performance*: Replaced by the term "characteristic field".

33. *Primary Service Area*: The area in which the groundwave is not subject to objectionable interference.

34. *Secondary Service Area*: The area served by the skywave and not subject to objectionable interference. The signal is subject to intermittent variations in field strength.

35. *Normally Protected Contour*: The continuous line joining points where the field intensity has a value which determines the areas of primary or secondary service in the absence of interfering signals.

36. *Reduced Protected Contour*: A contour which results from the action of one or more interfering signals of higher value than the maximum permissible within the normally protected contour.

37. *Maximum Permissible Interfering Signal*: The maximum permissible value for an undesired signal determined at any point on the normally protected contour or on the reduced contour, as the case may be, and which maintains a ratio with the desired signal prescribed in this Agreement.

38. *Objectionable Interference*: Objectionable interference is that caused by a signal which exceeds the maximum permissible at the normally protected contour or the reduced contour, as the case may be, under the terms of this Agreement.

39. *Daytime Operation*: Daytime operation means operation between the times of local sunrise and local sunset.

40. *Nighttime Operation*: Nighttime operation means operation between the times of local sunset and local sunrise.

Article IV

SYMBOLS

41. The symbols to be used in this Agreement will have the following meanings:

English text	*Spanish text*	
Hz	Hz	hertz (c/s).
kHz	kHz	kilohertz (kc/s).
W	W	watt.
kW	kW	kilowatt.
mV/m	mV/m	millivolts/meter.
uV/m	uV/m	microvolts/meter.
U	C	unlimited time (day and night).
D	D	daytime operation.
N	N	nighttime operation.
ND	ND	omnidirectional or non-directional antenna.
DA	AD	directional antenna.
DA-1	AD-1	directional antenna: the digit indicates the same pattern, but not necessarily the same power, day and night.
DA-2	AD-2	directional antenna: the digit indicates different patterns day and night, with either the same or different power day and night.
DA-N	AD-N	directional antenna: the "N" indicates directional antenna used for nighttime operation only, omni-directional day.
DA-D	AD-D	directional antenna: the "D" indicates directional antenna used for daytime operation only.
S	S	shared hours of operation with other co-channel broadcasting stations, when used in connection with the operating hours of a broadcasting station.
SH	HE	specified hours of operation.
PO	OP	present operation.
MEOV	VMOP	maximum expected operating value.
Vide	Vease	see assignment on.
#	#	even though the estimated (resulting) characteristic field would be (is) higher than the one specified, the specified field is maintained by adjustment of the actual input power to the antenna.
PN	NP	previously notified but not implemented.

PART 3

GENERAL TECHNICAL PRINCIPLES

Article V

CHARACTERISTICS OF EMISSIONS

42. A. *Class of Emission*: A3

43. B. *Assigned Frequency Band*: 10 kHz (5 kHz band on each side of the carrier).

44. C. *Separation Between Channels*: The 107 channels in the standard band shall be separated 10 kHz from each other. 540 kHz shall be the first and 1600 kHz the last.

45. D. *Frequency Tolerance*: 20 Hz on either side of the assigned frequency. Nevertheless, both Contracting Parties recognize the desirability of implementing the tolerance of 10 Hz, in accordance with the Radio Regulations (Geneva, 1959) of the International Telecommunication Union.

46. E. *Determination of Power*: Power is determined at the input to the tower or towers in the radiating system.

47. F. *Spurious Emissions*: When the existence of an objectionable spurious emission has been demonstrated, the Contracting Party responsible for the station producing such emission shall take appropriate measures to eliminate it or reduce it to a level where it ceases to be objectionable.

48. G. *Modulation*: The percentage of modulation must be maintained at such a level that objectionable spurious emissions will not be produced.

Article VI

IDENTIFICATION, DISTRIBUTION AND USE OF CHANNELS

A. IDENTIFICATION AND DISTRIBUTION OF CHANNELS

49. 1. *Identification*: The 107 channels of the standard band are identified by their carrier frequencies.

50. 2. *Distribution*: The channels are divided into four types as follows:

51. *a*) Clear channels:

540, 640, 650, 660, 670, 700, 720, 730, 740, 750, 760, 770, 780, 800, 820, 830, 840, 860, 870, 880, 890, 900, 990, 1010, 1020, 1030, 1040, 1050, 1100, 1120, 1160, 1180, 1200, 1210, 1220, 1570 and 1580 kHz.

52. *b*) Shared clear channels:

680, 690, 710, 810, 850, 940, 1000, 1060, 1070, 1080, 1090, 1110, 1130, 1140, 1170, 1190, 1500, 1510, 1520, 1530, 1540, 1550 and 1560 kHz.

53. *c*) Regional channels:

550, 560, 570, 580, 590, 600, 610, 620, 630, 790, 910, 920, 930, 950, 960, 970, 980, 1150, 1250, 1260, 1270, 1280, 1290, 1300, 1310, 1320, 1330, 1350, 1360, 1370, 1380, 1390, 1410, 1420, 1430, 1440, 1460, 1470, 1480, 1590 and 1600 kHz.

54. *d*) Local channels:

1230, 1240, 1340, 1400, 1450 and 1490 kHz.

55. B. USE OF CHANNELS: The various types of channels shall be used in the manner specified below (the operating characteristics are indicated in Articles VIII and IX).

56. 1. Clear channels:

Class I-A and Class II stations shall operate on clear channels. Class II stations shall be subject to the limitations resulting from the engineering standards or from the special arrangements set forth in this Agreement.

57. 2. Shared clear channels:

Class I-B and Class II stations shall operate on shared clear channels. Class II stations shall be subject to the limitations resulting from the engineering standards or from the special arrangements set forth in this Agreement.

58. 3. Regional channels:

Only Class III stations shall operate on regional channels.

59. 4. Local channels:

Only Class IV stations shall operate on local channels.

Article VII

CLASSIFICATION OF STATIONS

60. A. Stations are classified as follows:

61. *Class I Stations*: Stations assigned to operate on clear channels or shared clear channels. They are sub-categorized as:

1. Class I-A Stations.
2. Class I-B Stations.

62. *Class II Stations*: Stations assigned to operate on clear channels or on shared clear channels.

63. *Class III Stations*: Stations assigned to operate on regional channels.

64. *Class IV Stations*: Stations assigned to operate on local channels.

65. B. The definition of each class of station is given in Part 2; operating power for each class is prescribed in Article IX; the protection ratio and the protected contour, which determine the service areas, in Article VIII.

Article VIII

PROTECTION AND INTERFERENCE

A. SERVICE AREAS NOT SUBJECT TO PROTECTION

66. No station need be protected from objectionable interference at any point outside of the boundaries of the country in which the station is located, except as may be provided elsewhere in this Agreement.

B. NORMALLY PROTECTED CONTOUR

67. The contours for each class of station which are to be protected by other stations on the same channel shall have the values set forth below:

1. *Class I-A Stations*:

68. *a*) *Daytime operation*:

Value not defined since the protection is established by the limits on the intensity of the permissible signal, which has a specified value at any point on the geographic boundary of the country having the priority on the respective clear channel (see Article XIV, Section A, Part 2).

69. *b*) *Nighttime operation*:

Value not defined since the secondary use of clear channels is limited to the assignments agreed upon by both Parties (see Article XIII, Section B) with the conditions of operation established in Annex II of this Agreement.

2. *Class I-B Stations*:

70. *a*) Daytime: 100 uV/m, groundwave.

71. *b*) Nighttime: 500 uV/m, skywave, 50% of the time.

3. *Class II Stations*:

72. *a*) Daytime: 500 uV/m, groundwave.

73. *b*) Nighttime: 2500 uV/m, groundwave.

74. The contours indicated are those which must be protected by other Class II stations.

4. *Class III Stations*:

75. *a*) Daytime: 500 uV/m, groundwave.

76. *b*) Nighttime: 2500 uV/m, groundwave.

5. *Class IV Stations:*

77. Daytime: 500 uV/m, groundwave.

C. PROTECTION RATIOS

1. *On the same channel* (groundwave and skywave).

78. The ratio of the protected signal to the maximum permissible interfering signal is 20 to 1, subject to the following terms and conditions:

79. *a*) No protection ratio shall apply to Class I-A stations (see Part 5).

80. *b*) The protected signal is specified in Section B of this Article. The interfering signal to be considered is:

81. (1) Groundwave in the case of daytime service.

82. (2) Skywave, 10% of the time, in the case of nighttime service.

2. *On adjacent channels*:

a) Groundwave:

83. The protected signal for daytime and nighttime operation shall be 500 uV/m, groundwave and its ratio to the interfering groundwave signal shall be as follows:

Separation between channels	*Protection Ratios*
10 kHz	2 to 1
20 kHz	1 to 30

b) Skywave:

84. No interference between stations on adjacent channels resulting from skywave transmission of an interfering signal will be considered.

D. MAXIMUM PERMISSIBLE INTERFERING SIGNAL ON THE SAME CHANNEL

85. The following values are derived by dividing the values specified for the normally protected contours of each class of station in Section B of this Article by the protection ratio set forth in Section C, paragraph 1 of this Article:

Class of station	*Day Groundwave*	*Night Skywave, 10% of the time*
I-A	None (See this Article, Section B, par. 1, and Part 5)	None
I-B	5 uV/m	25 uV/m
II	25 uV/m	125 uV/m
III	25 uV/m	125 uV/m
IV	25 uV/m	200 uV/m

E. PROTECTION OF REDUCED CONTOUR

86. When a reduction in the service area of a Class II or Class III station or in the daytime service area of a Class IV station has resulted from the acceptance at its normally protected contour of one or more interfering signals having values higher than that specified as the maximum permissible interfering signal, at the normally protected contour, a line describing the limit of the interference-free service area in the sector where the reduction in service occurs becomes the contour to be protected in that sector by a new signal.

F. OBJECTIONABLE INTERFERENCE AT THE NORMALLY PROTECTED CONTOUR OR THE REDUCED PROTECTED CONTOUR

1. *On the same channel.*

87. Objectionable interference shall be considered to exist or is to be expected when an undesired signal is stronger than:

88. *a*) The maximum permissible interfering signal specified in Section D of this Article, if it is at the normal contour.

89. *b*) The value resulting from the application of the method of calculation specified in Article XII if it is at the reduced contour.

2. *On an adjacent channel.*

90. Objectionable interference shall be considered to exist or is to be expected when an undesired signal is stronger than that resulting from the application of the protection ratios established in Section C, paragraph 2, of this Article.

91. The procedure for the computation of objectionable interference and the degree thereof is set forth in Article XI.

PART 4

OPERATION AND COMPUTATION PROCEDURES

Article IX

CHARACTERISTICS OF OPERATION

A. CALCULATION OF POWER

92. The operating power of a station is the product of the square of the current at the point of input to the antenna and the resistance at that point. In the case of a directional antenna, the input point is the distribution point to the system.

B. POWER OF THE DIFFERENT CLASSES OF STATIONS

93. *Except for specific cases to the contrary set forth in this agreement, the limits of permissible power of the different classes of stations are as follows:*

94. 1. Class I-A stations: 50 kW or more

95. 2. Class I-B stations: from 10 to 50 kW

96. 3. Class II stations: from 0.100 to 50 kW

97. 4. Class III stations: from 0.100 to 25 kW

However, in an area within 62 miles (100 km) of the common border, power in excess of 5 kW may not be used.

98. 5. Class IV stations:

Stations located 93 miles (150 km) or more from the common border: No greater than 1 kW day or 0.5 kW night.

Stations located at less than 93 miles (150 km) from the common border: No greater than 1 kW day or 0.250 kW night.

In all cases, the minimum power shall be 0.100 kW.

99. Powers for Class III and Class IV stations, other than those specified above, may be established by agreement between the Con-

tracting Parties, subject to the provisions contained in other applicable international Agreements.

C. DETERMINATION OF CHARACTERISTIC FIELD

100. The characteristic field will be determined using the curves in Annex XII. If, by application of the procedures set forth in Article XX, both Contracting Parties should agree to adopt standards for the measurement of field strength, the characteristic field may be determined by measurement following the procedure that may be adopted.

D. DETERMINATION OF THE TIMES OF SUNRISE AND SUNSET

101. 1. The times of sunrise and sunset on the 15th day of a calendar month, or the average time of sunrise and the average time of sunset for that month, adjusted, in either case, to the nearest quarter hour shall be considered the times of sunrise and sunset applying for all the days of that month.

102. Either Contracting Party may determine and apply the times of sunrise and sunset under the procedure set forth above, either at the locations of individual stations, or at the center of geographical areas designated by that Party. In the latter case, the times established for each area will apply to all of the stations in that area.

103. 2. As an exception to the operating times as determined in subparagraph 1 above, the Contracting Parties agree that limited operation before local sunrise or after local sunset with daytime facilities may be permitted subject to such terms and conditions as may be agreed upon between the Parties.

Article X

DETERMINATION OF RADIATED FIELD STRENGTH VALUES

A. FROM AN OMNIDIRECTIONAL ANTENNA

1. *For groundwave*

104. The value obtained by multiplying the characteristic field of the transmitting antenna by the square root of the power input to the antenna in kilowatts.

2. *For skywave*

105. The value obtained by following the procedure outlined above, correct-

ed in accordance with the vertical plane radiation characteristic of the antenna at the corresponding angle of departure determined from Annex VIII. The vertical plane radiation characteristic will be determined from the curves in Annex XV.

B. FROM A DIRECTIONAL ANTENNA

1. *For groundwave*

106. The value obtained from the horizontal plane radiation pattern of the antenna in the direction at which the strength of the received signal is to be determined.

2. *For skywave*

107. The value obtained from the vertical plane radiation pattern in the direction at which the strength of the received signal is to be determined, at an angle of departure determined from Annex VIII.

Article XI

COMPUTATION OF THE FIELD STRENGTH OF A RECEIVED SIGNAL

108. For computation of the field strength of a desired or undesired signal, as the case may be, the following procedures will be applied:

A. GROUNDWAVE

109. 1. The chart in Annex XI corresponding to the frequency of transmission is selected, and the curve from that chart is used corresponding to the conductivity of the path between the station and the point at which the field strength is to be determined. The field strength read from the curve for the distance from the station to the point at which the field strength is to be determined is that which would be produced by a station with a radiated field strength of 100 mV/m in the horizontal plane in the direction of the point under consideration. The value so determined is multiplied by the ratio of the radiated field strength of the station to 100 mV/m to obtain the field strength of the received signal.

110. 2. When several values of conductivity are presumed to occur along a propagation path, the "Kirke" or "Equivalent Distance" method of computation shall be used in computing the distance to a specified field strength contour, in conjunction with the charts in Annex XI. The Kirke method is described in Annex XIII.

B. SKYWAVE

111. Annex X is a chart containing curves which indicate the skywave field strength produced at various distances from a station with a radiated field strength of 100 mV/m. The 50% of the time curve is utilized for determining the field strength of a desired signal, the 10% of the time curve is used for determining the field strength of an undesired signal. The value read from the curve at the distance to the point at which the field strength is to be determined is multiplied by the ratio of the radiated field strength of the station to 100 mV/m to obtain the field strength of the received signal.

Article XII

CALCULATION AND PROTECTION OF THE REDUCED CONTOUR

A. REDUCED CONTOUR TO BE PROTECTED

112. The reduced contour to be protected, defined generally in Part 2, is the line joining all points within the normally protected contour where the ratio of the protected signal to an interfering signal from an existing co-channel station is 20 to 1.

B. COMPUTATION OF REDUCED CONTOUR

1. For daytime primary service of Class II, Class III and Class IV stations:

113. The reduced contour is drawn through all points where a ratio of 20 to 1 from the protected signal to the interfering signal is met.

2. For nighttime primary service of Class II and Class III stations:

114. The reduced contour will be considered to be a closed contour of uniform value which encircles the station and has a value which may be determined by multiplying by 20 the value of the strongest interfering signal from an existing co-channel station as computed at the site of the protected station.

C. PROTECTION OF REDUCED CONTOUR

115. At any point on or within the reduced contour, the strength of a new interfering signal from a co-channel station cannot exceed 70% of the value of the maximum existing interfering signal at that point, or one twentieth of the value of the normally protected contour, whichever is higher.

PART 5

PRIORITY AND USE OF CLEAR CHANNELS

Article XIII

PRIORITY

116. A. Each of the Contracting Parties hereby recognizes the clear channel priorities of the other, as set forth in Annex I to this Agreement.

117. B. Neither Contracting Party shall make any nighttime assignment on clear channels upon which the other Party has priority under this Agreement, except as provided in Annex II.

Article XIV

USE OF CLEAR CHANNELS

118. A. Daytime Class II assignments by either Contracting Party on clear channels upon which the other Party has priority will be subject to the following conditions:

1. Permissible Hours of Operation:

119. Sunrise to sunset at the location of the Class II station. Exceptions to these hours of operation may be permitted in accordance with Article IX, Section D, paragraph 2.

2. Permissible Signal Intensity at the Boundary of the Country Which Has the Priority on the Clear Channel Involved:

120. Not more than 5 uV/m groundwave (exceptions are set forth in Annex II).

3. Permissible Power:

121. The permissible power will be 50 kW (exceptions are set forth in Annex II).

122. B. It is recognized and agreed by the Contracting Parties that the secondary use of clear channels permitted under the terms of this Agreement imposes no obligation on the Party having the clear channel priority to protect such secondary use, and that the Party having the

clear channel priority retains full freedom to make such use of the clear channel upon which it has priority as it deems necessary to meet its domestic service needs.

PART 6

NOTIFICATION AND OFFICIAL LIST OF ASSIGNMENTS

Article XV

NOTIFICATION

A. PROCEDURE

1. *General*

123. *a*) From the date of entry into force of this Agreement and throughout the period in which it shall remain in effect, any notification made by either Contracting Party shall be in accordance with the procedure set forth in this Article, and on the basis of the provisions contained in Section A of Article XVI. Such notifications shall be made for all new assignments and all deletions or modifications of existing assignments.

124. *b*) To be valid, each such notification must be such that the new station, modification, or deletion proposed therein is in accordance with this Agreement.

125. *c*) No notification containing Basic Information is required for assignments agreed upon and listed in the Annexes to this Agreement. Regarding the sending of Supplementary Information, as well as compliance with the other applicable procedural provisions, it will be considered that the other Contracting Party has received the notification of the Basic Information upon the date of entry into force of this Agreement.

126. *d*) Except as may otherwise be specifically provided in this Agreement, changes in power, antenna characteristics, or location of an existing station may be made at any time, provided that such changes shall be notified in accordance with paragraphs *a*) and *b*) above. Stations making such changes are not required to afford greater protection to existing stations than that previously accepted.

127. *e*) Each Contracting Party may, within forty five days following the

date of receipt of a notification, advise the Party making the notification of any objection it may have thereto under the terms of this Agreement.

128. *f*) If the Supplementary Information required under paragraphs 2 and 3 of this Section does not accompany the Basic Information, and such Supplementary Information is received within the period specified in sub-paragraphs *b*) of said paragraphs, the period during which objection may be made shall be extended to thirty days after the date of receipt of such Supplementary Information.

129. *g*) Failure of the Contracting Party receiving a notification to object thereto within the period specified above shall be deemed to be an acceptance by that Party of such notification.

130. *h*) The date of priority of a notification shall be determined by the date of receipt by the Notification-Exchange Agency specified under Section A of Article XVI of the Basic Information constituting the notification, provided the Supplementary Information with respect to such notification is also submitted within the periods provided in sub-paragraphs *b*) of paragraphs 2 and 3 of this Section. If there is a conflict between two or more notifications, priority in the date of receipt thereof by the designated Notification-Exchange Agency shall govern.

2. *New assignments*

a) Basic Information.

131. In making any notification of a new assignment, the respective Contracting Party shall provide the following Basic Information which is essential to constitute a notification:

— Frequency.
— Class of station.
— Location (city and state).
— Power.
— Time of operation.
— Type of antenna (ND, DA-1, DA-2, DA-N or DA-D).
— Date of expected commencement of operation.

b) Supplementary Information.

132. The Basic Information should be accompanied by the following Supplementary Information:

133. (1) For omnidirectional antennas:

— Call sign.

— Geographic location of the antenna, in degrees and minutes of latitude and longitude.
— Electrical and physical dimensions (including those of the ground system).
— Characteristic field (where the configuration and dimensions of the antenna and ground system are such that the characteristic field can not be predicted with the use of Annex XII, the estimated value of the characteristic field will be notified and full details as to the design and dimensions of the radiation system will be furnished, including a drawing if necessary).

134. (2) For directional antenna systems:
— Call sign.
— Geographic location of the midpoint of the antenna system, in degrees and minutes of latitude and longitude.
— Electrical and physical dimensions (including those of the ground system).
— Horizontal radiation pattern for daytime operation.
— Horizontal and vertical radiation patterns for nighttime operation (the vertical patterns to be supplied only for directions in which protection is required for stations in the other country).

135. If the Supplementary Information is not provided at the same time as the Basic Information, it shall be submitted as soon thereafter as possible, but, in any event, not more than ninety days thereafter in the case of omnidirectional antennas or more than six months thereafter in the case of directional antennas.

3. *Modifications*

a) Basic Information.

136. In making any notification of a change in the assignment of an existing station, the respective Contracting Party shall provide the following Basic Information which is essential to constitute a notification:

— Nature of the change.
— Date the change is expected to be put into effect.
— Any revision of the Basic Information previously supplied.

b) Supplementary Information.

137. The Basic Information should be accompanied by such revision of the

Supplementary Information previously provided as may be necessary to make it conform to the change.

138. If such Supplementary Information is not provided at the same time as the Basic Information, it shall be submitted as soon thereafter as possible, but, in any event, not more than ninety days thereafter in the case of omnidirectional antennas or more than six months thereafter in the case of directional antennas.

4. *Deletions*

139. A notification of the deletion of an existing assignment shall consist of sufficient information to identify the assignment deleted, including:

— Frequency.
— Call sign.
— Location (city and state).
— Power.
— Effective date or anticipated date of cessation of operation.

5. *Dates of commencement of operation or cessation of operation*

140. Each Contracting Party shall notify the date a station commences service, ceases operation, or puts a change into effect. Such notification shall be made within sixty days following such date.

B. TRANSFER AND LOSS OF PRIORITIES

1. *Transfer of priorities*

141. Any notification of a deletion of an existing assignment shall be deemed to be an abandonment by the notifying Contracting Party of any rights it may have with respect to such assignment, unless it simultaneously notifies a new station on the same frequency which would be, in effect, a substitution for the deleted assignment. Such Party will retain, on behalf of the substituted assignment, the obligations and rights of the deleted assignment, including the priority, provided, however, that the substituted assignment does not result in interference to existing stations in the other country in excess of that previously caused by the station whose assignment is deleted.

2. *Loss of priorities*

a) For change of frequency.

142. Except as provided in paragraph 1 of this Section, any notification of

a change in an existing assignment that involves a change of frequency is, in effect, a deletion of the previous assignment, and will constitute the simultaneous notification of a new assignment, which notification will be given the priority corresponding to the notification of a new assignment.

b) For not providing the Supplementary Information.

143. (1) An assignment which is included in the Annexes to this Agreement shall cease to have any effect if the Supplementary Information required by sub-paragraphs *b*) of paragraphs 2 and 3 of Section A of this Article, as the case may be, is not furnished within the respective time period specified in such sub-paragraphs. The time periods mentioned should be counted from the date this Agreement enters into force, in conformity with sub-paragraph *c*) of paragraph 1 of Section A of this Article.

144. (2) Any other notification of a new or modified assignment shall cease to have any effect if the Supplementary Information required in paragraph 2 or in paragraph 3 of Section A of this Article, as the case may be, is not furnished within the respective time periods established in said paragraphs, beginning:

145. (i) on the date this Agreement enters into force if it was notified during the period between March 10, 1967, and the date on which this Agreement enters into force; or

146. (ii) on the date of notification of the Basic Information, if it was notified after the entry into force of this Agreement.

147. In exceptional cases, the time periods established in sub-paragraphs *b*) of paragraph 2 and 3 of Section A of this Article may be extended for a like period of time by a Contracting Party upon notice to the other Party, if the notice refers to assignments covered in said paragraphs or to assignments covered in sub-paragraph *c*) of paragraph 1 of Section A of this Article. The notification submitted shall cease to have any effect if the Supplementary Information is not furnished before the end of one such extension of time.

c) For not initiating the operation or not putting the change into effect.

148. Any notification, including those listed in the Annexes to this Agreement, with respect to which there has been furnished the Basic and Supplementary Information in the form and within the periods specified in this Agreement, shall cease to have any effect if, within two years after the date the Supplementary Information has been received, the station concerned has not actually begun to operate or has not put the change into effect. In

special cases, arising from unusual circumstances, the effect of such notification may be extended for successive periods of six months, upon notice to the other Contracting Party within the effective period of the notification in question. Such notice must include detailed reasons to justify such extension.

149. *d*) The provisions of sub-paragraphs *b*) and *c*) of this paragraph shall not be applicable to those assignments covered by special arrangements between the Parties, which are set forth in the appropriate Annexes to this Agreement.

Article XVI

OFFICIAL LIST OF ASSIGNMENTS

A. NOTIFICATION-EXCHANGE AGENCY

150. 1. All notifications of new assignments, deletions, and changes in existing assignments, as well as objections to such assignments and other communications made according to Article XV of this Part shall be delivered by each Contracting Party through the entity which may be designated by the countries of the North American Region. Such entity will be the Notification-Exchange Agency for performance of the notification-exchange function subject to concurrence between the Contracting Parties effected by an exchange of written notices.

151. 2. Pending designation of an entity by the countries of the North American Region to perform the notification-exchange function, or, if after designation of such entity, it should temporarily or permanently fail to perform the notification-exchange function, such function shall be effected directly between the Contracting Parties until the designated entity performs its function.

B. RECOGNITION OF ACCEPTED ASSIGNMENTS

152. All assignments accepted before the date this Agreement enters into force shall continue to be accepted. All notifications inconsistent with the assignments set forth in the Annexes to this Agreement, or otherwise inconsistent with the terms of this Agreement, are hereby withdrawn, and such action will be confirmed through the notification procedure after entry into force of this Agreement.

C. ESTABLISHMENT AND REVISION OF THE OFFICIAL LIST OF ASSIGNMENTS

1. *Establishment of the Official List*

153. *a*) For the purpose of establishing an Official List of Assignments, each Contracting Party will prepare and present to the other Party a list of its assignments as soon as possible, but, in any event, not later than 9 months after entry into force of this agreement. Said lists will contain the following information with respect to each assignment:

(1) Name of the country.
(2) Frequency.
(3) Call sign (if assigned).
(4) Location (city and state).
(5) Power.
(6) Type of antenna (ND, DA-1, DA-2, DA-N, DA-D).
(7) Time of operation.
(8) Class of station.
(9) Whether or not the assignment is in operation as notified.

154. With respect to (9) the following annotations will be used:

155. (i) "(under construction)": this indicates a new station which has not been notified as in operation.

156. (ii) "(P.O.: ———)": this is for the purpose of indicating the present characteristics of an existing assignment modified by a subsequent notification, whose operation with the new characteristics has not been notified. Where a change in frequency is involved, the listing of the assignment under the new frequency will have the annotation "(P.O.: ——— kHz)" and the listing under the existing frequency will have the annotation "(Vide ——— kHz)" showing the frequency of the proposed operation.

157. (iii) "(P.N.: ———, N.L. # ———)": this is for the purpose of indicating the characteristics of a previously notified assignment when it is modified by notification of changed characteristics before the notification of the date of commencement of operation of the previous assignment.

158. *b*) The lists to be exchanged in accordance with paragraph 1, sub-paragraph *a*) of this Section will include every assignment starting with the information contained in the Appendix attached to the Recommendations of the North American Regional Broadcasting Engineering Meeting,

January 30, 1941, as modified by subsequent notifications up to and including those set forth in the last Notification List of both Parties sent on or before the day preceding the date of entry into force of this Agreement, and as modified by the provisions of the Agreement between the United States of America and the United Mexican States Concerning Radio Broadcasting in the Standard Broadcasting Band, Mexico, D.F., January 29, 1957,[1] and as further modified by the assignments contained in Annexes to this Agreement. Those notified assignments which have not been accepted will be marked with the appropriate notation, such as "objection", "reservation", "being processed", etc., and they will be treated in accordance with the procedure contained in this Agreement.

159. *c*) Each Contracting Party will transmit its comments to the other no later than six months after both Parties have received the respective lists. Such comments may include any questions either Party has with respect to any assignment included in the list of the other Party. Any questions which may arise with respect to either the assignments listed or with respect to their operating characteristics will be resolved by reference to the information used in preparation of the list as set forth in paragraph 1, sub-paragraph *b*) of this Section, or by consultation.

160. *d*) When both Parties have agreed upon the assignments which should be contained in each list, both lists will be adopted officially and will constitute the Official List of Assignments of both Parties. Such adoption will be made by an exchange of letters between the respective communications Agencies of the two Parties. Immediately thereafter copies of such Lists will be forwarded by both Parties to the Notification-Exchange Agency for the purpose of being registered as the Official List of Assignments.

161. *e*) If either Contracting Party has failed to supply all or a part of the Supplementary Information referred to in paragraphs 2 and 3 of Section A of Article XV concerning any assignment notified before the day prior to the date this agreement enters into force, such party will supply said Supplementary Information as soon as possible based upon the first edition of the Official List. To that effect, such Party will proceed in the following order:

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[1] United Nations, *Treaty Series*, vol. 418, p. 253.

162. (i) Particular assignments specified by the other Party in a list to be furnished after this Agreement enters into force.

163. (ii) Assignments within 62 miles (100 km) of the common border.

164. (iii) Other assignments that, due to their nature, are capable of causing objectionable interference to assignments of the other Party.

165. (iv) The remaining assignments.

2. *Revision of the Official List*

166. *a*) After adoption of the Official List in accordance with paragraph 1, sub-paragraph *d*) of this Section, the Contracting Parties will exchange yearly editions of the Official List through the Notification-Exchange Agency. Each edition of the List will consist of the original, or master, List of Assignments of both Parties, as modified by subsequent notifications of new assignments, and modification and deletion of existing assignments. The individual listings of assignments contained in the editions of the List shall be in accordance with paragraph 1, sub-paragraph *a*) of this Section.

167. *b*) Every six months, each Contracting Party will forward to the other Party a supplementary list containing notifications made during that six-month period. Such supplementary list will be forwarded within one month after the close of each six-month period.

PART 7

RATIFICATION, ENTRY INTO FORCE, DURATION AND TERMINATION

Article XVII

RATIFICATION

168. This Agreement shall be subject to ratification by both of the Contracting Parties in accordance with their respective constitutional procedures.

Article XVIII

ENTRY INTO FORCE AND DURATION

A. ENTRY INTO FORCE

169. This Agreement, which replaces the Agreement of January 29, 1957, will enter into force on the date of exchange of instruments of

ratification. The exchange of instruments of ratification shall be carried out in Washington, D.C.

B. DURATION

170. 1. This Agreement shall remain in force for a period of five years, unless, before the end of such period, it is terminated pursuant to Article XIX, or is replaced by a new agreement between the Contracting Parties.

171. 2. If not replaced by new agreement, or if not terminated at the expiration of the aforesaid five-year period in accordance with Article XIX, this Agreement shall remain in force indefinitely thereafter until replaced by a new agreement between the Contracting Parties or until terminated in accordance with the provisions of Article XIX.

Article XIX

TERMINATION

172. A. Either of the Contracting Parties may terminate this Agreement by a written notice of termination to the other Party through diplomatic channels. The termination shall take effect one year after the date of receipt of such notice.

173. B. If either of the Contracting Parties considers that the other is acting or has acted in a manner incompatible with the provisions of this Agreement, consultations shall take place between the Parties concerning the matter. In the event that such consultations do not result in a solution of the problem to the satisfaction of both Parties, the complaining Party may proceed to terminate this Agreement. The termination shall take effect ninety days after the date of receipt of the written notice thereof.

Article XX

REVISION

174. Changes in and additions to the technical standards, including the conductivity maps and the propagation curves, and in the notification procedure may be effected through diplomatic channels when such changes and additions, embodied in amendments or supplements to the appropriate Parts or Annexes, prepared jointly by designated officials of the two Contracting Parties, have been approved by the administrative agency or department of each Party having jurisdiction over broadcasting matters.

IN WITNESS WHEREOF, the respective Plenipotentiaries have signed this Agreement.

DONE at Mexico City, Distrito Federal, in duplicate, in the Spanish and English languages, each having equal authenticity, this 11th day of December, one thousand nine hundred sixty eight.

For the Government
of the United States of America:

[*Signed*]
FULTON FREEMAN
Ambassador Extraordinary
and Plenipotentiary

For the Government
of the United Mexican States:

[*Signed*]
ANTONIO PADILLA SEGURA
Secretary of Communications
and Transportation

ANNEX I

TABLE OF CLEAR CHANNEL PRIORITIES

Channel kHz	*Country having Priority*	*Channel kHz*	*Country having Priority*
540	Mexico	870	USA
640	USA	880	USA
650	USA	890	USA
660	USA	900	Mexico
670	USA	1020	USA
700	USA	1030	USA
720	USA	1040	USA
730	Mexico*	1050	Mexico
750	USA	1100	USA
760	USA	1120	USA
770	USA	1160	USA
780	USA	1180	USA
800	Mexico	1200	USA
820	USA	1210	USA
830	USA	1220	Mexico
840	USA	1570	Mexico

* The Parties hereto recognize the limitation to the Mexican operation on 730 kHz caused by operation of stations in the United States of America on the frequency 740 kHz and agree to continue their study of this matter in an effort to arrive at an adjustment in the use of 740 kHz that will be mutually satisfactory and upon the basis of which the United States of America may modify its existing priority for the use of 740 kHz. Each Contracting Party agrees to exchange views and to give careful consideration to any suggestions by the other Party.

ANNEX II

SPECIAL USE OF CLEAR CHANNELS

In conformity with the provisions of Articles XIII and XIV of this Agreement, and without limiting in any way the freedom of each Party as stated in Article XIV, Section B, both Parties agree on the following:

A. *Daytime Use*

1. On the channel 540 kHz, the intensity of the maximum interfering signal permissible on the boundary of Mexico may be 10 uV/m, groundwave.

2. The United Mexican States may assign stations to operate with powers not in excess of 5 kW on the following channels: 700 kHz, 720 kHz, 1120 kHz, 1210 kHz.

3. The United States of America may assign stations to operate with powers not in excess of 5 kW on the following channels: 730 kHz, 800 kHz, 900 kHz, 1050 kHz, 1220 kHz and 1570 kHz. However, on the following channels stations shall not be assigned with powers in excess of 1 kW in areas within the distances of the locations that are specified.

a) 800 kHz: 820 miles (1319 kilometers) from Ciudad Juárez, Chihuahua.

b) 1050 kHz: 620 miles (998 kilometers) from Monterrey, Nuevo León.

c) 1570 kHz: 620 miles (998 kilometers) from Ciudad Acuña, Coahuila.

B. *Nighttime Use*

1. The United Mexican States may make the following assignments:

a) 660 kHz Mexico, D.F.
Radiation not to exceed 190 mV/m over the arc 337 degrees true, east to 68 degrees true. Outside of this arc, the field strength at any point on the border or boundary of the United States shall not exceed 100 uV/m (10 per cent skywave).

b) 760 kHz Los Reyes, Mexico
Radiation not to exceed 98 mV/m over the arc 12 degrees true, east to 66 degrees true. Outside of this arc, the field strength at any point on the border or boundary of the United States shall not exceed 142 uV/m (10 per cent skywave).

c) 830 kHz Mexico, D.F.
Radiation not to exceed the indicated values over the following arcs:
1) 100 mV/m over the arc 343 degrees true, east to 355 degrees true.

2) 93 mV/m over the arc 355 degrees true, east to 22 degrees true.

3) 100 mV/m over the arc 22 degrees true, east to 34 degrees true.

Outside of the arc 343 degrees true, east to 34 degrees true, the field strength at any point on the border or boundary of the United States shall not exceed 130 uV/m (10 per cent skywave).

d) 1020 kHz Macuspana, Tabasco.
Power not to exceed 0.100 kW.

e) 1030 kHz Mexico, D.F., 20 kW, DA.
The directional antenna shall not radiate more than 190 mV/m on a bearing of 40 degrees true, and the radiation over the arc 335 degrees true, east to 55 degrees true shall not exceed that which would be produced by a directional antenna having the following parameters:
1) Two towers, spaced 90 degrees along a line bearing 40 degrees true.
2) Current ratio: 1:1
3) Phase difference 72 degrees.

f) 1180 kHz Mexico, D.F.
Radiation not to exceed 178 mV/m over the arc 340 degrees true, east to 68 degrees true. Outside of this arc, the field strength shall not exceed 100 uV/m (10 per cent skywave) at any point on the border or boundary of the United States.

2. The United States of America may make the following assignments:

a) 540 kHz, Cypress Gardens, Florida, 10 kW, DA.
The directional antenna shall not radiate more than 42 mV/m over the arc 210 degrees true to 232 degrees true, and 98 mV/m over the arc 232 degrees true to 287 degrees true.

Other assignments on this frequency
1) shall be located outside the area bounded on the north by the parallel 35 degrees north and on the east by the meridian 93 degrees west; provided that no such assignments may be made within the United States of America south of the parallel 30 degrees north, and
2) shall not deliver a signal strength at any point within the United Mexican States in excess of 50 uV/m (10 per cent skywave).

b) 730 kHz Santurce, Puerto Rico, 10 kW, DA.
25 uV/m (10 per cent skywave) maximum permissible signal at the nearest point on the Mexican boundary.

c) 800 kHz Juneau, Alaska, 5 kW, ND.

d) 900 kHz Fairbanks, Alaska, 10 kW, ND.

e) 1050 kHz New York, New York, 50 kW, DA.
Any change in the presently notified directional antenna radiation pattern shall not result in an increase in radiation over the arc 210 degrees true to 273 degrees true.

f) 1220 kHz Cleveland, Ohio, 50 kW, DA.
Any change in the presently notified directional antenna radiation pattern shall not result in an increase in radiation over the arc 193 degrees true to 264 degrees true.

ANNEX III

TABLE OF SHARED CLEAR CHANNELS PRIORITIES

Channel kHz	*Station*	*Country having Priority*	*Antenna*	*Operation*
680	San Francisco, California	USA	ND	U
690	Tijuana, Baja California	Mexico	DA	U
710	New York, New York	USA	DA	U
710	Seattle, Washington	USA	DA	U
810	San Francisco, California	USA	DA	U
810	Schenectady, New York	USA	ND	U
850	Denver, Colorado	USA	ND	U
850	Orizaba, Veracruz	Mexico	DA	U
940	Mexico, Distrito Federal	Mexico	ND	U
1000	Mexico, Distrito Federal	Mexico	DA	U
1000	Chicago, Illinois	USA	DA	U
1000	Seattle, Washington	USA	DA	U
1060	Mexico, Distrito Federal	Mexico	DA	U
1060	Philadelphia, Pennsylvania	USA	DA	U
1070	Los Angeles, California	USA	ND	U
1080	Hartford, Connecticut	USA	DA	U
1080	Dallas, Texas	USA	DA	U
1090	Rosarito, Baja California	Mexico	DA	U
1090	Little Rock, Arkansas	USA	DA	U
1090	Baltimore, Maryland	USA	DA	U
1110	Omaha, Nebraska	USA	DA	U
1110	Charlotte, North Carolina	USA	DA	U
1130	Shreveport, Louisiana	USA	DA	U
1130	New York, New York	USA	DA	U
1140	Monterrey, Nuevo Leon	Mexico	DA	U
1140	Richmond, Virginia	USA	DA	U
1170	Tulsa, Oklahoma	USA	DA	U

Channel kHz	*Station*	*Country having Priority*	*Antenna*	*Operation*
1170	Wheeling, West Virginia	USA	DA	U
1190	Guadalajara, Jalisco	Mexico	DA	U
1190	Fort Wayne, Indiana	USA	DA	U
1190	Portland, Oregon	USA	DA	U
1500	Washington, District of Columbia	USA	DA	U
1500	St. Paul, Minnesota	USA	DA	U
1510	Nashville, Tennessee	USA	DA	U
1510	Spokane, Washington	USA	DA	U
1520	Buffalo, New York	USA	DA	U
1520	Oklahoma City, Oklahoma	USA	DA	U
1530	Sacramento, California	USA	DA	U
1530	Cincinnati, Ohio	USA	DA	U
1540	Waterloo, Iowa	USA	DA	U
1550	Jalapa, Veracruz	Mexico	ND	U
1560	New York, New York	USA	DA	U
1560	Bakersfield, California	USA	DA	U

ANNEX IV

CLASS IV STATIONS

(Increase in power within the Border Zone)

Provisions for the increase in daytime power of Class IV stations in both countries which operate on local channels within 100 kilometers of the common border

1. A station of either Contracting Party assigned to operate with a daytime power of 250 W prior to the date of entry into force of this Agreement may be increased in daytime power to 1 kW at any time after that date pursuant to the notification procedure of Part 6 of this Agreement, provided that operation with such power will not result in objectionable interference to stations of the other Party.

2. Class IV stations, which the Parties have agreed may increase power to 1 kW under the terms of this Annex, are listed in two Groups. Group 1 includes stations for which coordination is not required, stations in Group 2 require coordination.

3. Neither Contracting Party will authorize a station listed in Group 2 of this Annex to begin operation with a daytime power of 1 kW, without prior

consultation with the other Party to insure that stations of that Party involving mutual interference with its station will begin simultaneous operation with 1 kW daytime power.

4. If, one year after the date of entry into force of this Agreement, some stations in Group 2 have not been notified for power increases to 1 kW, and arrangements have not been made for their simultaneous increase, the Contracting Parties will consult with respect to such stations to determine if individual solutions can be found to the problems which preclude a power increase.

5. Stations assigned by either Contracting Party to local channels after the date of signing of this Agreement must protect the contours of existing stations within 100 km of the common border on these channels in the other country based upon a daytime power of 1 kW.

The above provisions apply to the following stations:

Group 1
No Coordination required

Frequency kHz	*Location*	*Frequency kHz*	*Location*
1230	El Centro, California	1400	Yuma, Arizona
1230	Ensenada, Baja California (actually notified on 1240 kHz)	1400	Uvalde, Texas
1230	Demming, New Mexico	1450	Ojinaga, Chihuahua
1240	Raymondville, Texas	1450	Valle Hermoso, Tamaulipas
1240	San Diego, California	1450	Carrizo Springs, Texas
1340	El Paso, Texas	1490	Ciudad Juarez, Chihuahua
1340	Ojinaga, Chihuahua	1340	Nogales, Arizona
1340	Ciudad Acuna, Coahuila	1450	Las Cruces, New Mexico
1400	Nueva Rosita, Coahuila	1240	Ciudad Juarez, Chihuahua
1400	Sabinas Hidalgo, Nuevo Leon	1490	Calexico, California

Group 2

Coordination Required

Frequency kHz	*Location*	*Frequency kHz*	*Location*
1240	Piedras Negras, Coahuila	1450	Tucson, Arizona
1230	Del Rio, Texas	1450	Magdalena, Sonora
1340	Needles, California	1450	Douglas, Arizona
1340	Cathedral City, California	1490	Tucson, Arizona
1340	Mexicali, Baja California	1490	Agua Prieta, Sonora
1340	Nuevo Laredo, Tamaulipas	1490	Matamoros, Tamaulipas
1340	Matamoros, Tamaulipas	1490	Beeville, Texas
1340	North of Victoria, Texas	1490	Laredo, Texas
1340	Port Arthur, Texas	1240	Globe, Arizona
1450	Escondido, California	1240	Nogales, Sonora
1450	Ensenada, Baja California	1230	Bisbee, Arizona
1450	Blythe, California	1400	Sta. Paula, California
1450	San Luis Rio Colorado, Sonora	1400	Ensenada, Baja California
		1400	Santa Ana, Sonora
		1400	Tucson, Arizona

ANNEX V

SPECIFIC CASES

(Other than the special cases listed in Annex II)

	Freq. kHz	*Location*	*Power*	*Antenna*	*Hours*	*Class*
1.	660	Cd. Delicias, Chih.	0.500	ND	D	II
2.	690	State of Yucatan	50	DA-N	U	II/j
3.	850	Orizaba, Veracruz	100-D 50-N	DA-N	U	I-B/c,g
4.	870	Glendale, California	5	ND	D	II/k
5.	900	West Covina, California	0.500	DA-D	D	II/o
6.	940	Mexico, D.F.	150-D 50-N	ND	U	I-B
7.	1000	Mexico, D.F.	10	ND	U	I-B/d
8.	1070	Houston, Texas	10-D 5-N	DA-1	U	II
9.	1110	Mexico, D.F.	50	DA-N	U	II/e
10.	1140	Monterrey, N.L.	50	DA-N	U	I-B/h
11.	1150	Cd. Obregón, Sonora	5-D 0.300-N	ND	U	III
12.	1170	Coatzacoalcos, Ver.	0.250-N	ND	U	II/b
13.	1170	La Piedad, Mich.	0.100-N	ND	U	II

	Freq. kHz	*Location*	*Power*	*Antenna*	*Hours*	*Class*
14.	1190	Guadalajara, Jalisco	10	ND	U	I-B/i
			50	DA-N		I-B/i
15.	1240	Piedras Negras, Coah.	0.250-D	ND	U	IV
			0.200-N			
16.	1300	Nogales, Son.	1-D	ND	U	III/l
17.	1360	Piedras Negras, Coah.	0.250-N	ND	U	III/m
18.	1400	Santa Ana, Sonora	1-D	ND	U	IV
			0.250-N			
19.	1480	Cd. Morelos, B.C.	0.500-D	ND	U	III
			0.100-N			
20.	1540	Waterloo, Iowa	50	DA-N	U	I-B/a,c
21.	1550	Jalapa, Veracruz	20	ND	U	I-B/c,n
22.	1560	Bakersfield, California	10	DA-1	U	I-B/a,c
23.	1560	New York, N.Y.	50	DA-2	U	I-B/a,c
24.	1560	Cd. Cuauhtemoc, Chih.	2-D	ND	U	II
			0.250-N			
25.	1590	Ensenada, B.C.	1	ND	U	III
26.	1590	Mexicali, B.C.	10	ND	D	III
27.	1600	Brownsville, Texas	1	DA-2	U	III/f,a

NOTES

a. With presently notified DA pattern. Any subsequent change in this pattern must not result in increased interference to stations in the other country under the engineering standards of this Agreement.

b. Otherwise: 1 kW, DA-N, with a maximum radiation of 0.250 kW toward the secondary service area of the station in Tulsa, Oklahoma.

c. Future assignments will protect this station in accordance with its I-B classification.

d. Non-directional operation with power not to exceed 10 kW is permissible. If higher power is used a directional antenna will be employed which will restrict the radiation to 715 mV/m, or less, unattenuated field, at one mile (1.609 kilometers), over the arc between the true bearings 11 and 47 degrees (WCFL secondary service area) and to 1125 mV/m, unattenuated field, at one mile, (1.609 kilometers), over an arc between the true bearings 314 and 333 degrees (KOMO secondary service area).

e. The directional antenna shall restrict the radiation to 200 mV/m, unattenuated, at one mile (1.609 kilometers), over an arc between the true bearings 327 and 10 degrees (KFAB secondary service area) and over an arc between the true bearings 27 to 65 degrees (WBT secondary service area).

f. This station will be subject to interference which may be caused at any time by XEAE, Ciudad Acuña, Coahuila, with power of 5 kW, or if XEAE changes location to Monterrey, Nuevo León, to operate with 1 kW. In either case, XEAE will operate with non-directional antenna.

g. 850 kc/s. The Orizaba, Veracruz, assignment on 850 kc/s will protect the secondary service area (0.5 mV/m, 50 per cent sky wave contour) of KOA, Denver, Colorado, in accordance with the I-B classification of KOA.

h. This assignment shall provide I-B protection to the United States I-B station in Richmond, Virginia, except that the unattenuated field at one mile (1.609 kilometers) toward the northern part of the Richmond station's secondary service area may be increased to the following values at the bearing indicated:

250 mV/m at 19° true
140 mV/m at 22° true
140 mV/m at 35° true
200 mV/m at 52° true

i. Non-directional operation with 10 kW is permissible. If higher power is used the directional antenna shall restrict radiation to 870 mV/m, unattenuated field at one mile (1.609 kilometers), over an arc between the true bearings 323 and 343 degrees (KEX secondary service area) and to 715 mV/m, unattenuated field at one mile (1.609 kilometers), over an arc between the true bearings 17 and 59 degrees (WOWO secondary service area).

j. The United Mexican States may operate a Class II station at any point in the Yucatan Peninsula with power of 50 kW using a directional antenna that will give to stations in the United States of America protection equivalent to that which they receive from the present operation of the station in Mexico, Distrito Federal, on this frequency (5 kW, ND-U-II).

k. Characteristic field: 175 mV/m.

l. 1 kW maximum daytime power.

m. 0.250 kW maximum nighttime power.

n. Nighttime operation: Radiation not in excess of 1005 mV/m in the direction of Shreveport, La.

o. The field strength at Coronado Islands, B.C., shall not exceed that which would be produced by a directionl antenna having the following parameters:

1) Two towers, 79 degrees in height, spaced 118 degrees along a line bearing 151 degrees true.
2) Current ratio: 1:1.
3) Phase difference: — 63 degrees.

ANNEX VI

SUMMARY OF PROTECTED SIGNALS AND INTERFERING SIGNALS ON THE SAME CHANNEL

Class of Station	*Channel*	*Permissible Power*	*Protected signal*		*Maximum permissible interfering signal*	
			Day Groundwave	*Night*	*Day Groundwave*	*Night 10% Skywave*
I-A	Clear	50 kW or more	(1)	(1)	(1)	(1)
I-B	Shared clear	10 to 50 kW	100 uV/m	500 uV/m 50% skywave	5 uV/m	25 uV/m
II	Clear or Shared clear	0.1 to 50 kW	500 uV/m	2500 uV/m Groundwave	25 uV/m (2)	125 uV/m (2)
III	Regional	0.1 to 25 kW (3)	500 uV/m	2500 uV/m Groundwave	25 uV/m (2)	125 uV/m (2)
IV	Local	0.1 to 1 kW Day (3) 0.1 to 0.5 kW Night (3)	500 uV/m		25 uV/m (2)	

(1) The protection of Class I-A Stations is determined in accordance with the provisions of Part 5 and Annexes I and II.
(2) This value or 70% of the maximum existing interfering signal, whichever is greater.
(3) See Part 4, Article IX, paragraph B.

ANNEX VII

SUMMARY OF PROTECTED SIGNALS AND INTERFERING SIGNALS BETWEEN ADJACENT CHANNELS 10 kHz AND 20 kHz APART

Class of Station	*Protected Signal*	*Maximum permissible interfering signal*	
		± 10 kHz Day and Night	*± 20 kHz Day and Night*
For all classes	500 uV/m Groundwave	250 uV/m Groundwave	15000 uV/m Groundwave

NOTE:

No protection from interference resulting from skywave signal transmission is afforded between stations on adjacent channels.

ANNEX IX

EXAMPLE OF COMPUTATION OF SKYWAVE SIGNAL STRENGTH

Assume that it is desired to calculate the field strength of the interfering signal from station A at the reduced contour of station B, the distance from station A to the reduced contour of station B being 400 miles. Assume, also, that station A operates with 5 kW power, an omnidirectional antenna 68 electrical degrees in height, and a ground system of 90 radials, 1/4 wavelength long.

From Annex XII, the characteristic field of a vertical antenna of that height is 175 mV/m, producing a radiated field strength in the horizontal plane of 392 mV/m.

Annex VIII indicates a departure angle of 15 degrees for a distance of 400 miles. From Annex XV, the radiation characteristic in the vertical plane for this departure angle is 95%, so that the radiated field strength from Station A is

$$\frac{95 \times 392}{100} = 372 \text{ mV/m}$$

The 10% of the time curve of Annex X indicates that, for a radiated field strength of 100 mV/m, the field strength signal at 400 miles is 163 uV/m.

Since station A radiates 372 mV/m, the field strength of the interfering

signal from station A at the reduced contour of station B will be 163 uV/m times the ratio of 372 mV/m to 100 mV/m, or 606 uV/m; therefore:

$$163 \times \frac{372}{100} = 606\,\text{uV/m},\ 10\%\,\text{T}$$

If station A uses a directional antenna whose radiated field strength towards station B at a departure angle of 15 degrees is 128 mV/m, the strength of the interfering signal from station A at the reduced contour of station B will be 163 uV/m times the ratio of 128 mV/m to 100 mV/m, or 208.5 uV/m; viz:

$$163 \times \frac{128}{100} = 208.5\,\text{uV/m},\ 10\%\,\text{T}$$

ANNEX XI [1]

GROUNDWAVE FIELD STRENGTH CURVES AS A FUNCTION OF DISTANCE

ANNEX XII

CHARACTERISTIC FIELDS OF VERTICAL ANTENNAS

The attached graph may be used to predict the characteristic field of a simple vertical antenna erected at ground level. The antenna height to be employed in utilizing the graph is the physical height above ground level of the antenna in wave lengths.

Antennas with physical heights in excess of about 0.4 wave length are assumed to employ a ground screen, in addition to a radial system having at least 120 elements, not less than 0.25 wave lengths long.

Insufficient information is available to fully support the extension of curves for ground systems having less than 120-0.25 wave length radials to antenna heights greater than 0.3 wave length. Therefore, the values in this range are indicated by "dashed" lines.

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[1] Because of technical difficulties and after consultation with the registering Party, it was decided not to publish the 19 graphs constituting annex XI of the present Agreement. However, certified copies of the said 19 graphs were transmitted to the Secretariat with the documentation presented at the time of registration and were deposited with the Secretariat as an integral part of the Agreement so registered.

ANNEX XIII

KIRKE METHOD (equivalent distance)
for computation of groundwave field strength

Where a signal traverses a path over which different conductivities exist, the distance to a particular groundwave field intensity contour may be predicted by the use of the equivalent distance method.

Reasonably accurate results may be expected in predicting field intensities at a distance from the antenna by application of the equivalent distance method when the unattenuated field of the antenna, the various ground conductivities and the location of discontinuities are known. This method considers a wave to be propagated across a given conductivity according to the curve for a homogeneous earth of that conductivity. When the wave crosses from a region of one conductivity into a region of a second conductivity, the equivalent distance of the receiving point from the transmitter changes abruptly, but the field intensity does not. From a point just inside the second region the transmitter appears to be at that distance where, on the curve for a homogeneous earth of the second conductivity, the field intensity equals the value that occurred just across the boundary in the first region. Thus the equivalent distance from the receiving point to the transmitter may be either greater or less than the actual distance.

An imaginary transmitter is considered to exist at that equivalent distance. This technique is not intended to be used as a means of evaluating unattenuated field or ground conductivity by the analysis of measured data.

An example of the use of the equivalent distance method follows:

It is desired to determine the distance to the 0.5 mV/m and 0.025 mV/m contours of a station on a frequency of 1000 kHz with an inverse distance field of 100 mV/m at one mile being radiated over a path having a conductivity of 10 mmhos/m for a distance to 15 miles, 5 mmhos/m for the next 20 miles and 15 mmhos/m thereafter. By the use of the appropriate curves in Annex XI, Graph 12, it is seen that at a distance of 15 miles on the curve for 10 mmhos/m the field is 3.45 mV/m. The equivalent distance to this field intensity for a conductivity of 5 mmhos/m is 11 miles. Continuing on the propagation curve for he second conductivity, the 0.5 mV/m contour is encountered at a distance of 27.9 miles from the imaginary transmitter. Since the imaginary transmitter was 4 miles nearer (15 -11 miles) to the 0.5 mV/m contour, the distance from the contour to the actual transmitter is 31.9 miles (27.9+4 miles). The distance to the 0.025 mV/m contour is determined

by continuing on the propagation curve for the second conductivity to a distance of 31 miles (11+20 miles), at which point the field is read to be 0.39 mV/m. At this point the conductivity changes to 15 mmhos/m and from the curve relating to that conductivity, the equivalent distance is determined to be 58 miles—27 miles more distant than would obtain had a conductivity of 5 mmhos/m prevailed. Using the curve representing the conductivity of 15 mmhos/m the 0.025 mV/m contour is determined to be at an equivalent distance of 172 miles. Since the imaginary transmitter was considered to be 4 miles closer at the first boundary and 27 miles farther at the second boundary, the net effect is to consider the imaginary transmitter 23 miles (27—4 miles) more distant than the actual transmitter, thus the actual distance to the 0.025 mV/m contour is determined to be 149 miles (172—23 miles).

ANNEX XVI

Joint Consultative Broadcasting Committee

Both Contracting Parties agree that, if the notification of an assignment is the subject of comments, objections, counter-objections, etc. which result in a problem whose solution would require an undue lengh of time, they will consider the desirability of submitting such problem to the Joint Consultative Broadcasting Committee in order that this body may offer an appropriate recommendation.

In addition, both Parties also agree that the Committee can make studies of such matters as:

1. Possibility of evaluating skywave field strength, indirectly, based on the corresponding groundwave values.
2. Method of measurement and evaluation of field strength.
   a) groundwave
   b) skywave
3. Calculation of adjacent channel skywave interference between Class I stations.
4. Power tolerance.
5. Field Strength Tolerance.
6. Possible plan for the nighttime operation of Class II stations on clear channels with variable power.

If such studies result in recommendations for revision of this Agreement, such recommendations will be considered in accordance with Article XX of this Agreement.

EXCHANGE OF NOTES

I

Mexico, D. F., March 10, 1967

No. 1267

Excellency:

I have the honor to refer to recent conversations concerning radio broadcasting between officials of the Government of the United Mexican States and the Government of the United States of America. The following represents the intention and understanding of the Government of the United States of America with regard thereto.

During the life of the various Agreements governing radio broadcasting between the United Mexican States and the United States of America on medium, very high, and ultra-high frequency bands, questions arise concerning certain assignments which, when handled under normal procedures, often require an undue length of time for resolution. Examples of such questions are: the need to clarify, evaluate, and apply all pertinent data regarding assignments; the interpretation of applicable propagation curves and conductivity values; consideration of unusual terrain features; application of measurements, after a procedure is agreed upon which specifies the standards to be followed in making and evaluating such measurements, etc.

Moreover, the efficient and equitable development of broadcasting between the two countries will be fostered by conducting studies and experiments in each country, with a periodic exchange of the pertinent information concerning such matters as:

(*a*) Standards of protection;
(*b*) Propagation characteristics;
(*c*) Evaluation of objectionable interference; and
(*d*) Other similar matters.

Periodic meetings between the officials of the two countries would make possible, on the one hand, the more rapid and efficient resolution of questions concerning individual assignments and, on the other hand, it would help to make available mature studies on important technical questions and, possibly, agreements for incorporation of the results of such studies in new or modified agreements, which would help to shorten and expedite the corresponding negotiations.

Therefore, in order to achieve these purposes:

(*a*) A Joint Consultative Broadcasting Committee will be set up and put in operation; it will be composed of officials of the two countries whose principal function will be to recommend to their respective Governments the action to be undertaken as a result of their studies, research, measurements, etc.;

(*b*) The matters to be dealt with by the Committee at each meeting will be agreed to in advance by the two Governments;

(*c*) Once approved, the recommendations of the Joint Committee will be carried out within each country exclusively by personnel designated by the respective Governments;

(*d*) The aforesaid Committee will meet approximately every six months if so required by the number and importance of items to be dealt with, and furthermore, it may hold special or extraordinary meetings whenever it is so agreed;

(*e*) The meetings of the Committee will be held alternately in Mexico, D.F., and Washington, D.C., unless the circumstances and nature of a particular meeting require other arrangemets. The first meeting will take place in Mexico, D.F.;

(*f*) At its first meeting, the Committee will prepare its own rules and regulations governing its methods and rules of procedure for the proper conduct of the studies that may be undertaken in the two countries; these methods and rules may be revised by the Committee when circumstances so require.

If either country desires to terminate these arrangements, it will give six months notice to the other country.

If the foregoing also represents the intention and understanding of the Government of the United Mexican States, I would appreciate Your Excellency informing me to that effect.

Accept, Excellency, the renewed assurances of my highest consideration.

FULTON FREEMAN

His Excellency Antonio Carrillo Flores
Secretary of Foreign Relations
Mexico, D.F.

En respuesta, tengo el agrado de comunicar a Vuestra Excelencia que lo anterior representa igualmente el entendimiento del Gobierno de los Estados Unidos Mexicanos sobre los asuntos tratados.

Aprovecho esta oportunidad para reiterar a Vuestra Excelencia las seguridades de mi más alta y distinguida consideración.

ANTONIO CARILLO

Excelentísimo Señor Fulton Freeman,
Embajador Extraordinario y Plenipotenciario
de los Estados Unidos de América
México, D.F.

[TRANSLATION [1] — TRADUCTION [2]]

MINISTRY FOR FOREIGN RELATIONS
UNITED MEXICAN STATES
MEXICO

502073 Tlatelolco, D. F., March 10, 1967

Mr. Ambassador:

I have the honor to refer to Your Excellency's note No. 1267 of this date, the text of which in Spanish translation reads as follows:

[*See note I*]

In reply, I am happy to inform Your Excellency that the foregoing also represents the understanding of the Government of the United Mexican States concerning the matters treated.

Accept, Excellency, the renewed assurances of my highest and most distinguished consideration.

ANTONIO CARILLO

His Excellency Fulton Freeman
Ambassador Extraordinary and Plenipotentiary
of the United States of America
Mexico, D.F.

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[1] Translation supplied by the Government of the United States of America.
[2] Traduction fournie par le Gouvernement des États-Unis d'Amérique.