

ARRANGEMENT T

SHARING ARRANGEMENT BETWEEN THE DEPARTMENT OF INDUSTRY OF CANADA AND THE FEDERAL COMMUNICATIONS COMMISSION OF THE UNITED STATES OF AMERICA CONCERNING THE USE OF THE FREQUENCY BAND 160.200-161.580 MHz FOR LAND MOBILE AND FIXED SERVICES BY RAILROAD COMMUNICATIONS SYSTEMS ALONG THE CANADA-UNITED STATES BORDER

The Department of Industry of Canada ("Industry Canada") and the Federal Communications Commission of the United States of America ("FCC"), hereinafter referred to as the "Agencies",

Have agreed to the following:

1. Scope

- 1.1 This Arrangement is done pursuant to the *Exchange of Notes (October 24, 1962) between the Government of Canada and the Government of the United States of America concerning the coordination and use of radio frequencies above thirty megacycles per second*, with annex, done at Ottawa October 24, 1962, as amended, and covers the sharing and coordination of frequency spectrum for the establishment and operation of land mobile and fixed railroad communication systems in the band 160.200-161.580 MHz along the Canada-United States border.
- 1.2 This Arrangement is subject to review at any time at the request of either Agency, the U.S. Department of State or the Department of Foreign Affairs and International Trade of Canada.

2. General Principles

- 2.1 The Agencies shall share the frequency band 160.200-161.580 MHz on an equal basis within 120 km of the Canada-United States border ("the coordination zone"). To the extent possible, the Agencies shall also have full use of this frequency band within their respective countries for the deployment of land mobile and fixed railroad communications systems.
- 2.2 Use of frequencies within the band 160.200-161.580 MHz for other than railroad communications shall be subject to the procedures set out in Arrangement A annexed to the *Agreement concerning the Coordination and Use of Radio Frequencies Above Thirty Megacycles per Second*, as amended 24 June 1965. The Agencies shall also ensure that such use does not unduly constrain the deployment of railroad communications systems within the railroad service areas.

- 2.3 The Agencies shall take into account No. **5.226** of the International Telecommunication Union *Radio Regulations*, as amended from time to time, when authorizing the use of frequencies within the band 160.200-161.580 MHz.

3. Cross-Border Coordination

- 3.1 The Agencies shall require that licensees, who operate railroad transmitting stations within the band 160.200-161.580 MHz in their respective railroad service areas on both sides of the border within the coordination zone, coordinate with licensees on the other side of the border. This coordination can be effected through the Agencies, through railroad associations¹ or other entities as may be designated by the Agencies, which can carry out the required coordination on behalf of the licensees.
- 3.2 The Agencies may designate associations or other entities to effect coordination provided that they enter into agreements with the railroad association² on the other side of the border that: (1) facilitate coordination and allow for the reasonable and timely development of the respective radio systems of the licensees and (2) allow for the provision of services by each railroad licensee within its licensed service area to the maximum extent possible and (3) facilitate resolution of harmful interference, should it occur.
- 3.3 The Agencies shall encourage railroad associations to take full advantage of interference mitigation techniques such as antenna directivity, polarization, frequency offset, shielding, site selection and/or power control to facilitate the coordination of the licensees' systems.
- 3.4 To facilitate cross-border coordination between railroad associations, the Agencies shall encourage the railroad associations to exchange data as listed in Annex A to this Arrangement.
- 3.5 In the event that the designated railroad associations cannot reach a mutually acceptable agreement, either party may request a resolution of the case by the Agencies. A station subject to coordination shall not be placed in operation until an agreement has been reached between the railroad associations or until the Agencies have agreed on sharing terms.
- 3.6 If a licence for railroad operations is transferred, assigned or reissued, the Agencies shall require any existing agreements that formed the basis of coordination in the border area to continue to apply with respect to the new railroad licensee unless a new agreement is reached.

¹ The current designated railroad associations in this case are the Association of American Railroads (AAR) and the Railway Association of Canada (RAC).

² For the purposes of this Arrangement, provisions for "railroad associations" can equally apply to other entities as designated by the Agencies.

- 3.7 If no licensee exists on the other side of the border, then the railroad association may request a resolution by the Agencies.
- 3.8 Upon request by either Agency, the other Agency shall provide all data and calculations used in determining compliance with this Arrangement.

Annex A - Parameters for Coordination

Licensee information (Corporate name/Mailing address/Phone/Fax/Email address)

Location of transmitter (Community/State/Province)

Geographical coordinates of transmitting antenna (NAD 83)

Equivalent Radiated Power (ERP) (dBW)

Ground elevation and antenna height above ground (m)

Centre frequency (MHz)

Polarization

Antenna pattern/tabulation of the pattern

Azimuth of the maximum antenna gain

Bandwidth and Emission designation



Railway Association
of Canada

Association des chemins
de fer du Canada

Frequency Assignment Plan between the Association of American Railroads (AAR) and the Railway Association of Canada (RAC) Concerning the Use of the Band 160.215 to 161.565 MHz along the United States-Canada Border

Scope

The attached document is the frequency assignment plan between the Association of American Railroads (AAR) and the Railway Association of Canada (RAC) concerning use of the 160.2150 to 161.5650 MHz frequency band. This Plan reflects the conversion of the VHF railway spectrum between 160.2150 and 160.5650 MHz from a 30 to a 15 kHz wide channel structure. The attached frequency plan replaces any previous frequency plan, specifically both plans specified in the exchange of letters between the Department of Communications of Canada (now Industry Canada) and the Federal Communications Commission (FCC) of the United States of America, dated March 25, 1960, June 20, 1960 and July 28, 1960.


General principles

- This frequency assignment plan applies when the frequencies listed in this sharing agreement are used for land mobile communications related to railway services within 120 km (75 miles) on either side of the United States-Canada border.
- The AAR and the RAC must comply with existing and future international coordination arrangements and procedures. This includes coordination between the United States and Canada as new government-to-government requirements are introduced. This frequency assignment plan will supersede the railroad frequency assignment plans specified in the 1960 exchange of letters referenced above.
- It is understood that these country-specific allotments will be used as guiding principles and that exceptions can be made subject to coordination between the AAR and the RAC.
- Any interference occurring between American and Canadian stations in the aforementioned band will be dealt with by the AAR and the RAC.
- Radio stations operating on frequencies listed in this frequency assignment plan will operate in accordance with all applicable national regulations, including but not limited to emission masks, power limits and antenna height.
- This frequency assignment plan will become effective upon signature of both parties to this plan.

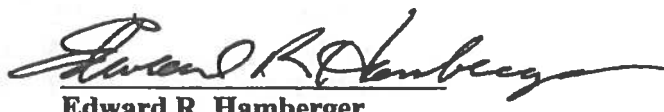
Frequency assignment plan between the Association of American Railroads (AAR) and the Railway Association of Canada (RAC)
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Confirmation of acceptance

This frequency assignment plan applies to all VHF frequency assignments listed in it within 120 km (75 miles) of the United States-Canada border. It will be in force no later than January 1st, 2013.



Cliff Mackay
President and CEO
The Railway Association of Canada
(November 2011)



Edward R. Hamberger
President and CEO
The Association of American Railroads
(November 2011)

Frequency assignment plan between the Association of American Railroads (AAR) and the Railway Association of Canada (RAC)
Concerning the Use of the Band 160.215 to 161.565 MHz along the United States-Canada Border

Country	Centre Frequency (MHz)
Canada	160.2150
Canada	160.2225
United States	160.2300
United States	160.2375
Canada	160.2450
Canada	160.2525
United States	160.2600
United States	160.2675
Canada	160.2750
Canada	160.2825
United States	160.2900
United States	160.2975
Canada	160.3050
Canada	160.3125
United States	160.3200
United States	160.3275
Canada	160.3350
Canada	160.3425
United States	160.3500
United States	160.3575
Canada	160.3650
Canada	160.3725
United States	160.3800
United States	160.3875
Canada	160.3950
Canada	160.4025
United States	160.4100
United States	160.4175
Canada	160.4250
Canada	160.4325
United States	160.4400
United States	160.4475
Canada	160.4550
Canada	160.4625
United States	160.4700
United States	160.4775
Canada	160.4850
Canada	160.4925
United States	160.5000

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Country	Centre Frequency (MHz)
United States	160.5075
Canada	160.5150
Canada	160.5225
United States	160.5300
United States	160.5375
Canada	160.5450
Canada	160.5525
United States	160.5600
United States	160.5675
Canada	160.5750
Canada	160.5825
United States	160.5900
United States	160.5975
Canada	160.6050
Canada	160.6125
United States	160.6200
United States	160.6275
Canada	160.6350
Canada	160.6425
United States	160.6500
United States	160.6575
Canada	160.6650
Canada	160.6725
United States	160.6800
United States	160.6875
Canada	160.6950
Canada	160.7025
United States	160.7100
United States	160.7175
Canada	160.7250
Canada	160.7325
United States	160.7400
United States	160.7475
Canada	160.7550
Canada	160.7625
United States	160.7700
United States	160.7775
Canada	160.7850
Canada	160.7925

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Country	Centre Frequency (MHz)
United States	160.8000
United States	160.8075
Canada	160.8150
Canada	160.8225
United States	160.8300
United States	160.8375
Canada	160.8450
Canada	160.8525
United States	160.8600
United States	160.8675
Canada	160.8750
Canada	160.8825
United States	160.8900
United States	160.8975
Canada	160.9050
Canada	160.9125
United States	160.9200
United States	160.9275
Canada	160.9350
Canada	160.9425
United States	160.9500
United States	160.9575
Canada	160.9650
Canada	160.9725
United States	160.9800
United States	160.9875
Canada	160.9950
Canada	161.0025
United States	161.0100
United States	161.0175
Canada	161.0250
Canada	161.0325
United States	161.0400
United States	161.0475
Canada	161.0550
Canada	161.0625
United States	161.0700
United States	161.0775
Canada	161.0850

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Country	Centre Frequency (MHz)
Canada	161.0925
United States	161.1000
United States	161.1075
Canada	161.1150
Canada	161.1225
United States	161.1300
United States	161.1375
Canada	161.1450
Canada	161.1525
United States	161.1600
United States	161.1675
Canada	161.1750
Canada	161.1825
United States	161.1900
United States	161.1975
Canada	161.2050
Canada	161.2125
United States	161.2200
United States	161.2275
Canada	161.2350
Canada	161.2425
United States	161.2500
United States	161.2575
Canada	161.2650
Canada	161.2725
United States	161.2800
United States	161.2875
Canada	161.2950
Canada	161.3025
United States	161.3100
United States	161.3175
Canada	161.3250
Canada	161.3325
United States	161.3400
United States	161.3475
Canada	161.3550
Canada	161.3625
United States	161.3700
United States	161.3775

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Country	Centre Frequency (MHz)
Canada	161.3850
Canada	161.3925
United States	161.4000
United States	161.4075
Canada	161.4150
Canada	161.4225
United States	161.4300
United States	161.4375
Canada	161.4450
Canada	161.4525
United States	161.4600
United States	161.4675
Canada	161.4750
Canada	161.4825
United States	161.4900
United States	161.4975
Canada	161.5050
Canada	161.5125
United States	161.5200
United States	161.5275
Canada	161.5350
Canada	161.5425
United States	161.5500
United States	161.5575
Canada	161.5650