



Government
of Canada
Department of Communications

PM 1-3

POLICY MANUAL

PM-1 RADIO LICENSING

PART 3

I. MARITIME MOBILE SERVICE

EFFECTIVE DEC 15/76

CANADA/U.S.A. CHANNELLING ARRANGEMENT FOR
WEST COAST VHF MARITIME MOBILE PUBLIC CORRESPONDENCE

1. The provisions of this arrangement apply to waters of the State of Washington and of the Province of British Columbia within the coordination boundaries of "Arrangement A" of the Canada/U.S.A. Frequency Coordination Agreement above 30 MHz.
2. This channelling arrangement applies to the following public correspondence channels of Appendix 18 Mar 2 of the International Radio Regulations: channels 24, 84, 25, 85, 26, 86, 27, 87 and 28.
3. Shore-based stations (Note 1) may be established by either country in accordance with the provisions of this arrangement without prior coordination with the other country. There shall, however, prior to implementation, be an exchange of information in respect of the establishment of new stations or a change in technical parameters of existing stations.
4. Shore-based stations proposed for establishment which are not in accordance with the provisions of this arrangement shall be subject to prior coordination in accordance with the provisions of "Arrangement A" of the Canada/U.S.A. Frequency Coordination Agreement above 30 MHz. Such stations shall not be protected from interference or cause interference to existing or future stations which are established in accordance with the provisions of this arrangement.
5. Existing stations shall comply with the provisions of this arrangement within 12 months after it becomes effective.

Note 1: In the U.S.A., a shore-based station is a coast station.

Definitions and Conditions:

- a. Public Correspondence Sector: a distinct geographical area to which is allotted primary, supplementary and local channels. Channels shall be assigned in accordance with Annexes A and B.
- b. Primary Channel: a channel intended to cover the greater portion of a public correspondence sector. It may provide some coverage of an adjacent sector but must not cause harmful interference beyond the adjacent sector.
- c. Supplementary Channel: a channel intended to improve coverage of a portion of a sector poorly covered by a primary channel or to relieve traffic congestion on a primary channel. It must not cause harmful interference beyond the adjacent sector.
- d. Local Channel: a low-power channel designed to provide local coverage of certain bays, inlets and ports where coverage of primary or supplementary channels is poor or where heavy traffic loading warrants it. It must not cause harmful interference to primary or supplementary channels or to local channels in other sectors.

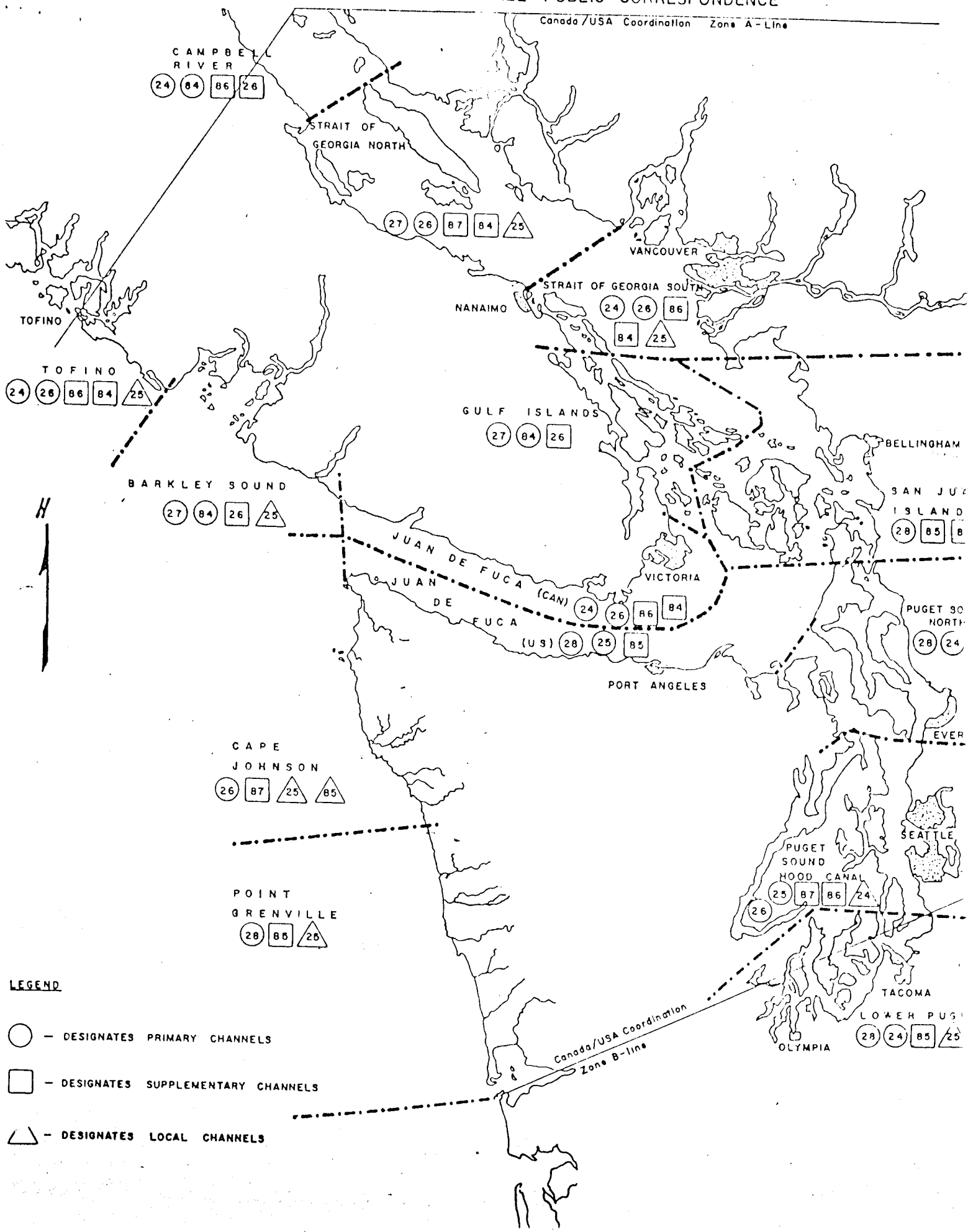
7. Technical Characteristics of Shore-based Stations:

- a. For primary and supplementary channels the maximum transmitter power shall be 50 watts and the maximum ERP shall be 125 watts. Antennas shall be sited no higher than necessary to provide the desired coverage within the sector.
- b. For local channels the ERP shall not exceed 10 watts. Low siting, directive antennas and natural topography shall be employed to confine coverage to the local area and, in any event, to prevent harmful interference to channels in other sectors.
- c. For station design purposes the tolerable interference level shall be considered as a received signal of -107 dBm (-137 dBW) from a vertical dipole located 30 feet above the water.

- In authorizing the establishment of shore-based stations without coordination under the provisions of this arrangement, each Administration shall ensure that the station coverage and interference range have been computed in accordance with sound engineering practices.
9. In the event that harmful interference is experienced by a station operating in accordance with this arrangement, the following steps shall be taken:
 - a. The operator of the station affected by the interference shall report the details of the situation to his Administration and, at the same time, shall approach the operator of the station causing the interference in an attempt to resolve the problem between the two operating agencies.
 - b. The Administration shall inform the other Administration of the report but, at this time, make no request for mitigating action.
 - c. Should a satisfactory resolution be obtained between the two operating agencies, each shall report the results to its Administration and, at the same time, seek authorization for any consequential technical changes to the station.
 - d. Failing a satisfactory resolution of the problem between the two operating agencies, the operator of the station affected by the interference shall so inform his Administration which will file a harmful interference report with the other Administration and request mitigation of the interference.
 - e. Either Administration can request that coordinated tests be carried out to confirm the existence, nature and extent of the interference.
10. This arrangement, which is subject to periodic review at the request of either Administration, supersedes the provisions set forth in the Canada/U.S.A. exchanges of letters dated December 10 and 16, 1965, and January 9 and June 8, 1973, insofar as they pertain to the use of the public correspondence channels stipulated in paragraph 2 above, in the area described in paragraph 1 above.

CHANNELLING ARRANGEMENT

PUBLIC CORRESPONDENCE SECTOR	PRIMARY CHANNEL		SUPPLEMENTARY CHANNEL		LOCAL CHANNEL	REMARKS
<u>BRITISH COLUMBIA</u>						
Tofino	24	26	86	84	25	
Barkley Sound	27	84	26		25	
Juan de Fuca (Can)	24	26	86	84		
Gulf Islands	27	84	26			
St. of Georgia South	24	26	86	84	25	
St. of Georgia North	27	26	87	84	25	
Campbell River	24	84	86	26		
<u>WASHINGTON</u>						
Cape Johnson	26		87		85 25	
Pt. Grenville	28		85		25	
Juan de Fuca (USA)	28	25	85			Ch.28-Western portion. Ch.25 -Eastern portion
San Juan Islands	28		85	87		
Puget Sound North	28	24	85			Ch.28 - West of Whidbey Isl. Ch.24 - East of Whidbey Isl.
Puget Sound Hood Canal	26	25	87	86	24	
Lower Puget Sound	28	24	85		25	



LEGEND

- - DESIGNATES PRIMARY CHANNELS
- - DESIGNATES SUPPLEMENTARY CHANNELS
- △ - DESIGNATES LOCAL CHANNELS

Canada/USA Coordination
Zone B-Line

CANADA/U.S.A. VHF CHANNELLING ARRANGEMENT FOR MARITIME MOBILE
PUBLIC CORRESPONDENCE ON THE GREAT LAKES AND THE ST. LAWRENCE
SEAWAY

1. The provisions of this arrangement apply to the waters of the Great Lakes and the St. Lawrence Seaway within the coordination boundaries of "Arrangement A" of the Canada/U.S.A. Frequency Coordination Agreement above 30 MHz.
2. This arrangement applies to the following public correspondence channels of Appendix 18 Part 2 of the International Radio Regulations:

<u>Channels</u>	<u>Ship Stations</u>	<u>Coast Stations</u>
24	157.200	161.8
84	157.225	161.825
25	157.250	161.850
85	157.275	161.875
26	157.300	161.900
86	157.325	161.925
27	157.350	161.950
87	157.375	161.975
28	157.400	162.000
88	157.425	162.025

3. In considering that
 - a) U.S. operational requirements can be satisfied by 5 channels,
 - b) Canadian operational requirements can be satisfied by 4 channels,

- c) Canada and the U.S.A. will use one shared channel, the following channelling arrangement is agreed:
 Canadian channels: 24, 85, 27, 88 ^{Note 1}
 U.S. channels: 84, 25, 86, 87, 28 ^{Note 2}
 Shared channel: 26 ^{Note 3}

Note 1) Also assignable to United States stations within the frequency coordination zone, following successful coordination with Canada.

Note 2) Also assignable to Canadian stations within the frequency coordination zone, following successful coordination with the United States.

Note 3) Changes to existing assignments and new assignments within the frequency coordination zone of either country are subject to prior coordination with the other Administration.

4. In adopting the above arrangement, it is understood that each Administration has complete flexibility in making use of its channels within the frequency coordination zone; that the option provided by footnotes 1) and 2) should not be exercised unless the proposed assignment cannot be accommodated on a channel allotted under the plan; that an assignment made under the provisions of footnotes 1) or 2) should not be a bar to future utilization of the channel by the Administration to which it is allotted under this arrangement; and that such an assignment will be vacated if requested by the Administration to which the channel is allotted.

5. This arrangement, which is subject to periodic review at the request of either Administration, supersedes the provisions set forth in the Canada/U.S.A. exchanges of letters dated December 10 and 16, 1965, and January 9 and June 8, 1973, insofar as they pertain to the use of the public correspondence channels stipulated in paragraph 3 above, in the area described in paragraph 1 above.

NOTES: NO CANADA-U.S. COORDINATION REQUIRED
IF ASSIGNMENTS MADE IN ACCORDANCE
WITH THIS CHANNELLING ARRANGEMENT.
CHANNEL 26 HOWEVER, REQUIRES
CANADA-U.S. COORDINATION IN ALL CASES.

CANADA/USA COUNSELLING ARRANGEMENT
FOR EAST COAST VHF MARITIME MOBILE PUBLIC
CORRESPONDENCE

1. The provisions of this arrangement apply to the Canadian and U.S.A. east coast waters including the St. Lawrence River east of the St. Lawrence Seaway within the coordination boundaries of "Arrangement A" of the Canada/U.S.A. Frequency Coordination Agreement above 30 MHz.
2. This arrangement applies to the following public correspondence channels of Appendix 18 Mar 2 of the International Radio Regulations:

<u>Channels</u>	<u>Ship Stations</u>	<u>Coast Stations</u>
24	157.200	161.8
84	157.225	161.825
25	157.250	161.850
85	157.275	161.875
26	157.300	161.900
86	157.325	161.925
27	157.350	161.950
87	157.375	161.975
28	157.400	162.000
88	157.425	162.025

3. In considering that

- a) U.S. operational requirements can be satisfied by 5 channels,
- b) Canadian operational requirements can be satisfied by 4 channels,

c) Canada and the U.S.A. will use one shared channel;
the following channelling arrangement is agreed:

Canadian channels: 24, 85, 27, 88 Note 1

U.S. channels: 84, 25, 86, 87, 28 Note 2

Shared channel: 26 Note 3

Note 1) Also assignable to United States stations within the frequency coordination zone, following successful coordination with Canada.

Note 2) Also assignable to Canadian stations within the frequency coordination zone, following successful coordination with the United States.

Note 3) Changes to existing assignments and new assignments within the frequency coordination zone of either country are subject to prior coordination with the other Administration.

4. In adopting the above arrangement, it is understood that each Administration has complete flexibility in making use of its channels within the frequency coordination zone; that the option provided by footnotes 1) and 2) should not be exercised unless the proposed assignment cannot be accommodated on a channel allotted under the plan; that an assignment made under the provisions of footnotes 1) or 2) should not be a bar to future utilization of the channel by the Administration to which it is allotted under this arrangement; and that such an assignment will be vacated if requested by the Administration to which the channel is allotted.

5. This arrangement, which is subject to periodic review at the request of either Administration, supersedes the provisions set forth in the Canada/U.S.A. exchanges of letters dated December 10 and 16, 1965, and January 9 and June 8, 1973, insofar as they pertain to the use of the public correspondence channels stipulated in paragraph 3 above, in the area described in paragraph 1 above.

NOTE: NO CANADA-U.S. COORDINATION REQUIRED
IF ASSIGNMENTS MADE IN ACCORDANCE
WITH THIS CHANNELLING ARRANGEMENT
CHANNEL 26, HOWEVER, REQUIRES
CANADA-U.S. COORDINATION

No. 17/73

For release
February 26, 1973.

CANADA AND U.S. AGREEMENT FOR
GREAT LAKES SAFETY BY MEANS OF RADIO

OTTAWA - Canada and the United States have joined forces to promote safety of life and property on the Great Lakes of North America by means of radio, Transport Minister Jean Marchand announced today.

Mr. Marchand and the United States Ambassador to Canada, His Excellency Adolph W. Schmidt, met in Ottawa this morning to sign an Agreement making provision for cooperation in the use of radiotelephone communication for distress and safety and navigational purposes. This Agreement will replace the existing 1952 Agreement for the promotion of safety on the Great Lakes by means of radio.

The main purposes of the Agreement are to provide cooperation and compatibility between Canada and the United States in the field of governmental regulation and practices relating to fitting usage and maintenance of radiocommunication equipment for safety purposes aboard specified classes of vessels of all nationalities operating on the Great Lakes of North America.

In addition to taking into account the technical advances made in the radiotelephone since 1952, the Agreement is intended to provide the highest practicable standards in matters concerning use of radiocommunication and associated equipment for maritime distress, safety and efficiency of navigation on the Great Lakes.

NEWSPAPER INFORMATION

PROPOSALS FOR AMENDMENT OF THE 1952 AGREEMENT FOR THE
PROMOTION OF SAFETY ON THE GREAT LAKES BY MEANS OF RADIO

Preamble

The Government of Canada and the Government of the United States of America, being desirous of promoting safety of life and property on the Great Lakes of North America by means of radio, and believing that this purpose will be served by making provision in common agreement for the use of radiotelephone communication for distress, safety and navigational purposes, and considering that these objectives may best be achieved and maintained by the conclusion of an Agreement between the two Governments, have designated for that purpose as their respective Plenipotentiaries:

The Government of Canada:

.....

The Government of the United States of America

.....

Who have agreed as follows:

Article 1

Purposes of the Agreement

The purposes of the Agreement are:

1. to provide for cooperation between Canada and the United States in the field of governmental regulation and practices relating to fitting, usage and maintenance of radiocommunication equipment for safety purposes aboard specified classes of vessels of all nationalities operating on the Great Lakes of North America.
2. to provide the highest practicable standards in matters concerning use of radiocommunication and associated equipment for maritime distress safety and efficiency of navigation on the Great Lakes.
3. to provide uniformity of regulations on radiocommunications for safety purposes to ships of all nationalities operating on the Great Lakes.

Article 2

General Provisions

1. The Contracting Governments undertake to collaborate in encouraging the highest practicable degree of uniformity in standards for radiocommunication and associated equipment, where such uniformity will facilitate and improve maritime safety and efficiency of navigation on the Great Lakes.
2. The Technical Regulations annexed to this Agreement are an integral part thereof and every reference to this Agreement implies at the same time a reference to the Technical Regulations unless the language or context of the reference clearly excludes the Technical Regulations.
3. The Agreement shall apply to vessels of all countries as provided in Article 5.
4. Each Contracting Government agrees that any vessel which is not subject to this Agreement, and which is permitted by such Government to use any radio frequency designated by this Agreement, shall be required, while on the Great Lakes, to use such radio frequency in the same manner as a vessel subject to this Agreement.
5. No provision of this Agreement shall prevent the use by a vessel or survival craft in distress of any means at its disposal to attract attention, make known its position, and obtain help.

Article 3

Definitions

For the purpose of this Agreement, unless expressly provided otherwise:

1. "Approved" or "Approval" means, in relation to compliance with the terms of this Agreement by vessels of Canada and of the United States, approval by Canada and the United States, respectively, and in relation to vessels of other countries, approval by either Canada or the United States.
2. "Vessel" includes every description of watercraft or other artificial contrivance used or capable of being used as a means of transportation on or over the water, except aircraft.
3. "Towing" means the act of pulling or pushing or towing alongside a vessel or floating object.
4. "Great Lakes" means all waters of Lakes Ontario, Erie, Huron (including Georgian Bay), Michigan, Superior, their connecting and tributary waters and the River St. Lawrence as far east as the lower exit of the St. Lambert Lock at Montreal in the Province of Quebec, Canada, but shall not include such of the connecting and tributary waters as may be specified in the Technical Regulations.

5. "Mile" means a statute mile of 5,280 feet or 1,609 meters.
6. "International Radio Regulations" means the Radio Regulations in force annexed to the International Telecommunication Convention, or any regulations which have been, or which from time to time in the future may be, substituted for such regulations.
7. "Technical Regulations" means the regulations in force referred to in paragraph 2 of Article 2 of this Agreement.
8. "Distress, safety and calling frequency" means the radiotelephone frequency or frequencies designated for this purpose in the Technical Regulations.
9. "Radiotelephone alarm signal" means the automatic alarm signal prescribed by the International Radio Regulations for radiotelephony.
10. "Radiotelephone auto alarm" means a warning device which is capable of being actuated automatically by the radiotelephone alarm signal, and which complies with the International Radio Regulations.

Article 4

Notification to the Intergovernmental Maritime Consultative Organization (IMCO)

1. The Contracting Governments agree to notify the Secretary-General of the IMCO as soon as possible of the entry into force of this Agreement and of any subsequent amendments.
2. The Contracting Governments agree, also, to deposit with the Secretary-General of IMCO a true copy of the Technical Regulations annexed to this Agreement and any amendments to these Technical Regulations which may subsequently be agreed in accordance with paragraph 2 of Article 18.

Article 5

Applicability to Vessels

A vessel to which this Agreement applies generally, as stated in paragraph 3 of Article 2 of this Agreement, and which falls in any of the following specific categories of paragraphs (a), (b), or (c), and not excepted by paragraphs (b) and (d), shall be subject to the requirements of this Agreement and the Technical Regulations while being navigated on the Great Lakes.

- (a) Every vessel 65 feet or over in length (measured from end to end over the deck exclusive of sheer), except that the Contracting Governments, each with respect to its own vessels, may specify a smaller dimension.
- (b) Every vessel engaged in towing another vessel or floating object, except:
 - (i) Where the maximum length of the towing vessel, measured from end to end over the deck exclusive of sheer, is less than twenty-six (26) feet and the length or breadth of the tow, exclusive of the towing line is less than sixty-five (65) feet.
 - (ii) Where the vessel towed complies with the requirements of this Agreement and the Technical Regulations annexed thereto,

- (iii) where the towing vessel and tow are located within a booming ground, or
 - (iv) where the tow has been undertaken in an emergency and neither the towing vessel nor the tow can comply with this Agreement and the Technical Regulations annexed thereto.
- (c) Any vessel carrying more than six passengers for hire.
 - (d) A vessel shall not be subject to the requirements of this Agreement if such vessel falls in any of the following specific categories:
 - (a) Ships of war and troop ships.
 - (b) Vessels owned and operated by any government and not engaged in trade.

Article 6

Coast Station Watch

1. Subject to paragraph 2, each Contracting Government agrees to ensure that necessary arrangements are made for coast stations to maintain a continuous watch on the distress, safety and calling frequency or frequencies.
2. During the non-navigation season of the St. Lawrence Seaway system, continuous watch need be maintained only by such shore stations as may be required for the service of shipping which continues to operate in the open water areas.

Article 7

Ship Station Operators and Listening Watch

1. There shall be on board, at least one operator whose qualifications for radiotelephone operation for safety purposes on the Great Lakes have been certified by the Contracting Governments each for citizens of its own country on vessels of that country and either for persons on vessels of other countries, as meeting the qualifications set forth in the Technical Regulations.
2. From among those certified operators, the master shall designate one or more who shall operate the radiotelephone station. The duties of the operators so designated need not be restricted to duties in connection with the radiotelephone station but may include any and all duties assigned them by the master.
3. There shall be an effective continuous listening watch on the distress, safety and calling frequency or frequencies required by the Technical Regulations by at least one person who has been designated by the master to perform such listening. The person so designated may simultaneously perform other duties relating to the operation or navigation of the vessel, provided that such other duties do not interfere with the effectiveness of the listening.

4. Notwithstanding paragraph 3 of this Article, Contracting Governments may require that the continuous listening watch shall be maintained on a frequency other than the distress, safety and calling frequencies while the vessel is within designated national waters of a Contracting Government where it assumes the distress watch for the vessel.
5. Vessels may be permitted by Contracting Governments, each with respect to its own national waters, to temporarily suspend the continuous listening watch required under paragraph 3 or paragraph 4 of this Article, in order to engage in Maritime Mobile communications on other frequencies.
6. A vessel shall not be navigated unless the qualified radio operator required under paragraph 1 of this Article is on board. However, if the vessel is deprived of the services of such operator while underway the master shall notify authorities of the Contracting Governments of this fact, and shall comply with such instructions as may be given by those authorities. In any event, the master shall obtain a satisfactory replacement operator at the earliest practicable moment.

Article 8

Cases of Force Majeure

A vessel which is not subject to the provisions of this Agreement shall not become subject thereto due to stress of weather or any other cause of force majeure.

Article 9

Exemptions

1. Each Contracting Government, if it considers that the conditions of the voyage or voyages affecting safety, including but not necessarily limited to the regularity, frequency and nature of the voyages, or other circumstances are such as to render the full application of this Agreement unreasonable or unnecessary, may exempt partially, conditionally or completely any individual vessel for one or more voyages or for any period of time not exceeding one year from the date of exemption. Each Contracting Government shall promptly notify the other of each exemption that is granted and of the significant terms thereof.
2. Since the waters to which this Agreement applies are under the jurisdiction of Canada or the United States, the exemptions referred to in paragraph 1 of this Article may be granted only by the Contracting Governments, each for vessels of its own country and either for the vessels of other countries.

Article 10

Radiotelephone Station

1. Each vessel shall, except as it may be exempted under Article 9, be fitted with a radiotelephone station in effective operating condition and approved as meeting the requirements set forth in the Technical Regulations.
2. If the vessel's radiotelephone station ceases to be in effective operating condition, the master shall forthwith exercise due diligence to restore the radiotelephone station to effective operating condition at the earliest practicable moment. If the radiotelephone station becomes defective while underway, the master, if practicable to do so, shall notify authorities of the Contracting Governments of this fact, and shall comply with such instructions as may be given by those authorities.

Article 11

Vessel Records

Each vessel shall, except as it may be exempted under Article 9, maintain such records of the use of the radiotelephone station for safety purposes as may be required by the Technical Regulations.

Article 12

Annual Inspections and Surveys

1. So far as concerns the enforcement of this Agreement, the radiotelephone stations of all vessels subject to the provisions of this Agreement and the Technical Regulations shall be subject to inspection from time to time. In addition, vessels subject to the provisions of this Agreement and the Technical Regulations belonging to the countries of the Contracting Governments shall be subject to a periodic survey of the radiotelephone station not less than once every thirteen months. This survey shall be made while the vessel is in active service or within not more than one month before the date on which it is placed in such service.
2. The inspection and survey of radiotelephone stations shall be carried out by the officers of the Contracting Governments for their respective vessels. With respect to any vessel which belongs to any other country, such inspection shall be carried out by officers of the Contracting Governments within whose jurisdiction such vessel first enters, and thereafter by the Contracting Government having jurisdiction as determined by the location of the vessel at least once each thirteen months or at the time of any inspection deemed necessary by such Government.

3. Each Contracting Government may entrust the inspection and survey of the radiotelephone stations either to surveyors nominated for this purpose or to organizations recognized by it. In every case the Contracting Government concerned fully guarantees the completeness and efficiency of the inspection and survey.

Article 13

Certification and Privileges

1. If, after appropriate inspection or survey made in accordance with Article 12, the Contracting Government responsible for the inspection or survey is satisfied that all relevant provisions of this Agreement have been complied with, including any exemption or conditions of exemption approved in accordance with Article 9, that fact shall be certified immediately after each such inspection or survey either on the vessel's radiotelephone station license or by means of another document as determined by the Contracting Government.
2. The certification prescribed by paragraph 1 of this Article shall be kept on board the vessel while the vessel is subject to the provisions of this Agreement, and shall be available for inspection by the officers authorized by the Contracting Governments to make such inspections. Certifications issued under the authority of a Contracting Government shall be accepted by the other Contracting Government for all purposes covered by this Agreement.

Article 14

Issue of Certificate by other Contracting Government

Each of the Contracting Governments may, at the request of the other, cause a vessel for the survey of which the requesting Government is primarily responsible to be surveyed and, if satisfied that the requirements of this Agreement are complied with, issue certificates to the vessel in accordance with the terms of this Agreement. Any certificate so issued must contain a statement to the effect that it has been issued at the request of the Government which made the request, and it shall have the same force and received the same recognition as a certificate issued under Article 13 of this Agreement.

Article 15

Control

1. Over and above the application of this Agreement as set forth in the provisions of Article 5 of this Agreement, every vessel required by this Agreement to have a certificate issued by one Contracting Government in accordance with Article 13 or Article 14 is subject in the ports of the other Contracting Government to control by officers duly authorized by such Government in so far as this control is directed towards verifying that (a) there is on board a valid certification, (b) that the conditions of the radiotelephone apparatus corresponds substantially with the particulars of that certification, and (c) that there are on board the necessary personnel.

2. In the event of this control giving rise to intervention of any kind, the authorities carrying out the control shall forthwith inform the appropriate authorities of the country to which the vessel belongs of all the circumstances in which intervention is deemed to be necessary.

Article 16

Responsibility of the Master and Radiotelephone Operators

The radiotelephone station and all persons designated to perform radiotelephone operating duties shall be under the control of the master. These designated persons and the master shall comply with applicable telecommunication laws and international agreements and with rules and regulations made pursuant thereto.

Article 17

Laws and Regulations

The Contracting Governments undertake to communicate to each other the text of laws, decrees, and regulations promulgated on the various matters within the scope of this Agreement.

Article 18

Amendments

1. Amendment of the Articles of this Agreement shall be by agreement between the Contracting Governments and shall be ratified subject to their respective internal laws and shall enter into force twelve months after the exchange of instruments of ratification.
2. Notwithstanding paragraph 1 of this Article, amendment or modification of the Technical Regulations annexed to this Agreement may, when agreed upon by the interested agencies of each of the Contracting Governments, be effected by an exchange of diplomatic notes between the Contracting Governments. Any such amendment or modification shall enter into force on the first day of February of the year following the exchange of notes constituting final agreement thereto, provided that an earlier date, but not less than three months from the date of such final agreement, may be specified in the exchange of notes if further delay would adversely affect the safety of vessels subject to this Agreement.

Article 19

Termination of Prior Agreement

Upon the coming into force of this Agreement, the Agreement for the Promotion of Safety on the Great Lakes by Means of Radio, signed at Ottawa on February 21, 1952, between the United States of America and Canada, shall terminate and cease to have effect.

Article 20

Entry into Force

This Agreement shall be ratified and instruments of ratification shall be exchanged at _____ as soon as possible. This Agreement shall come into force one year after the date on which the instruments of ratification are exchanged.

Article 21

Termination

1. This Agreement may be terminated by either Contracting Government at any time after the expiration of 5 years from the date on which this Agreement comes into force, except where the Contracting Governments agree to terminate earlier. Termination shall be effected by a notification in writing from either Contracting Government to the other Contracting Government.
2. Termination of this Agreement shall take effect twelve months after the date of such notification.

IN WITNESS WHEREOF, the respective Plenipotentiaries, duly authorized for that purpose, have signed this Agreement.

DONE in duplicate in the English and French languages, each having equal authenticity, at _____ this _____ day of _____, 19_____.

FOR THE GOVERNMENT OF THE UNITED STATES OF AMERICA:

FOR THE GOVERNMENT OF CANADA:

TECHNICAL REGULATIONS

Regulation 1

Location and Control of the Radiotelephone Station

Every radiotelephone station shall include one or more transmitters, one or more receivers, one or more sources of electrical energy, associated antennas and control equipment, and shall conform to the following:

1. The radiotelephone station, exclusive of the antennas and source of electrical energy, shall be located as high as practicable on the vessel, preferably on the bridge, and suitably protected from the harmful effects of water, temperature, electrical and mechanical noise.
2. The main operating position of the radiotelephone station shall be on the bridge, convenient to the conning position.
3. Where the radiotelephone station is located elsewhere than on the bridge, provision shall be made for complete operational control of the equipment at that location and at the bridge operating position, however, provision shall be made to take immediate and complete control of the equipment at the bridge operating position.
4. Provision shall be made for illuminating the operating controls at the main operating position.
5. Means shall be provided for charging any storage battery used in connection with the radiotelephone station.

Regulation 2

VHF and MF Radiotelephone Equipment

1. Effective January 1, 1975, every vessel shall have equipment complying with Section 1 of this Regulation.
2. During the interim period between the date this Agreement comes into force and January 1, 1975, every vessel of 500 gross tons or more shall have equipment complying with Sections I and II of this Regulation.
3. During the interim period between the date this Agreement comes into force and January 1, 1975, every vessel of less than 500 gross tons shall have equipment complying with either Section I or II of this Regulation.

Section I - VHF Radiotelephone Equipment operating in the band 156-162MHz.

1. The frequency 156.8 MHz is the distress safety and calling frequency in the band 156-162 MHz for all stations of the Maritime Mobile Service in the Great Lakes Area.

2. The VHF radiotelephone equipment shall comply with the technical characteristics prescribed in the International Radio Regulations for transmitters and receivers using 50 kHz spacing between adjacent channels. Such equipment on vessels of Contracting Governments shall also comply with the technical regulations of the respective countries.
3. Notwithstanding paragraph 2 of this Section, above, the Contracting Governments by mutual agreement may establish a date after which all vessels shall comply with the technical characteristics prescribed in the International Radio Regulations for transmitters and receivers using 25 kHz spacing between adjacent channels.
4. The VHF radiotelephone equipment shall be capable of transmitting and receiving speech on at least the following VHF channels:

Channel 16	-	156.80 MHz	-	Distress safety and calling
"		6 - 156.30	"	- Primary intership
"		12 - 156.60	"	-
"		14 - 156.70	"	-

Such other frequencies as are required for their service.

Note: The Contracting Governments recognize that the vessel's radiotelephone equipment may be used, in addition, for public correspondence and other purposes, such as the reception of weather broadcasts. Also, other frequencies may be required for vessels entering the Great Lakes via the St. Lawrence River. It is assumed, therefore, that the additional frequency channels for such purposes will be available on individual ships, according to their requirements.

5. The radiotelephone transmitter shall be capable of delivering at least 15 watts carrier power to the antenna or antennas specified below. In the case of transmitters using 25 kHz spacing between adjacent channels, as may be required under paragraph 3 of this section, above, provision shall be made to reduce this power readily to 1 watt.
6. The VHF radiotelephone receiver shall have a sensitivity of at least two microvolts across 50 ohm or equivalent input terminals, for a 20 decibel signal-to-noise ratio.
7. The associated antennas shall be effective, vertically polarized and located as high as practicable on the masts or superstructure of the vessel. The transmission line shall be effective and, to the extent practicable, shall impose a minimum loss.

Section II - MF Radiotelephone Equipment Operating in the Band 2000-2850 kHz

1. The frequency 2182 kHz is the distress safety and calling frequency in the band 2000-2850 kHz for all stations of the Maritime Mobile Service in the Great Lakes Area.

2. The MF radiotelephone equipment shall comply with the technical characteristics prescribed in the International Radio Regulations for transmitters and receivers. Such equipment on vessels of Contracting Governments shall also comply with the technical regulations of the respective countries.
3. The MF radiotelephone equipment shall be capable of transmitting and receiving speech on at least the following MF channels:

Channel 51 - 2182 kHz - Distress safety and calling
 " 52 - 2003 " - Primary intership

Such other frequencies as are required for their service.

Note: The Contracting Governments recognize that the vessel's radiotelephone equipment may be used, in addition, for public correspondence and other purposes such as the reception of weather broadcasts. It is assumed, therefore, that the additional frequency channels for such purposes will be available on individual ships, according to their requirements.

4. The MF radiotelephone transmitter shall be capable of delivering, for double sideband emission, at least 50 watts carrier power, or for single sideband at least 100 watts peak envelope power to the antenna or antennas specified in paragraph 5 of this section.
5. The associated antenna shall be non-directional and, when practicable, have an efficiency of 23%.
6. The receiving installation shall be capable of properly energizing a loud speaker when the radio field intensity of the received carrier wave (measured when no modulation is present) is as low as 10 microvolts per meter.

Regulation 3

Trial of Radiotelephone Installation

Each calendar day that a vessel is navigated, unless the normal use of the radiotelephone station demonstrates that the equipment is in proper operating condition for an emergency, a test communication for this purpose shall be made by a properly qualified person. Should the equipment be found by some person other than the master not to be in proper operating condition for an emergency, the master shall be promptly notified thereof.

Regulation 4

Operator Certificate

1. The person whose qualifications for radiotelephone operation for safety purposes on the Great Lakes must be certified, as stated in Article 7 of this Agreement, shall possess the following qualifications:
 - (a) General knowledge of practical radiotelephone operating procedure;
 - (b) Ability to send correctly and to receive correctly by radiotelephone using the English language; and

(c) Knowledge of the International Radio Regulations and specifically of that part of those Regulations relating to the safety of life.

2. In lieu of the requirements set forth in paragraph 1, above, a person shall be deemed to have the qualifications specified in paragraph 1 of this Regulation, if such person is the holder of a valid operator license or certificate which is the equivalent of, or of a higher class than, the restricted radiotelephone operator's certificate provided, however, that such person can demonstrate to the satisfaction of representatives of either of the Contracting Governments his ability to speak and understand the English language, and provided, further, that nothing in this paragraph shall be construed to change any of the requirements of the domestic law of Canada or the United States with respect to the acceptability of a radio operator license or certificate held by a person not a citizen of Canada or the United States for the operation of a radio station licensed by Canada or the United States.

Regulation 5

Record of Use of Radiotelephone Station for Safety Purposes

1. Each vessel shall have on board a record in appropriate form in which the following entries shall be made by an operator who has been certified as required by Article 7 of the Agreement, or by a person on duty listening as required by that article, or by a licensed or certificated deck officer:

- (a) The name, country of registry, and official number of the vessel;
- (b) The name and radio certificate number of each operator who has been certified as required by Article 7 of this Agreement and designated by the master to operate the radiotelephone station in such a form as to indicate when each such person was actually on board;
- (c) The name of the person making the particular entry;
- (d) All incidents of an unusual or exceptional nature, including the date and time thereof (Eastern Standard Time), connected with the use of radiotelephone which are of importance to safety, and in particular the substance of all distress calls and distress messages. Entries shall be made as soon as practicable after their observed occurrence, and in the case of distress shall include a statement of the location of the vessel at the time of the incident.
- (e) Details of the maintenance, including a record of the charging of any storage batteries which are necessary for the proper operation of the radiotelephone station; and

- (f) An entry shall be made each day that a vessel is navigated showing the operating condition of the equipment as determined by either the normal communication or the test communication required by Regulation 3 and showing that, if an improper operating condition was found, the master was properly notified thereof.
2. The record required by paragraph 1 of this Regulation shall be kept at the main radiotelephone operating location on the bridge while the vessel is being navigated. All entries in their original form shall be retained on board the vessel for a period of not less than one month from the date of entry; and for an additional period of not less than eleven months from the date of entry either on board the vessel or elsewhere as determined by the country to which the ship belongs. During this period, this record shall be available for inspection by the officers authorized by the Contracting Governments to make such inspections.

Regulation 6

Reserve Ship Radiotelephone Station or Auxiliary Power Source

The Contracting Governments, each with respect to their own vessels, may require the fitting of a reserve radiotelephone station having an independent source of power, or an auxiliary power source for the main radiotelephone station.

Regulation 7

Coast Station Distress Watch

Each Contracting Government agrees to ensure that necessary arrangements are made for coast stations to maintain an effective continuous aural watch on the radio-telephone distress, safety and calling frequency or frequencies.

POLICY MANUAL

PM-1

SECOND EDITION

REVISION NO. 60

SEPTEMBER 29, 1983

REVISION SUMMARY

- PM-1-3 1. PM-1-3 has been completely up-dated as the result of a task force study.

NEW AND REPLACEMENT PAGES

- PM-1-3 1. Replace entire PM-1-3.

Note: Revision asterisks have not been included.

NOTICE

This work represents a re-write of the Policy Manual, Part PM-1-3. Radio inspectors are cautioned that the review and consultation processes involved in the re-write of this manual were not completed. Errors in content or composition may be present. If detected, they should be reported to DOS via the proper channels.

MARITIME MOBILE SERVICE

INTRODUCTION

In this revised edition numerous corrections and additions have been made to bring Part 3 of the PM-1 manual up-to-date.

The Maritime Mobile Service covers three kinds of radiocommunications

- 1) a service to protect life and property, and to assure the safety of navigation,
- 2) a service for public and private correspondence between ships or between a ship and shore; and
- 3) a service connected with marine services such as pilotage, docking and tug dispatch.

In specific cases, vessels are required to be fitted with equipment capable of communicating in the maritime mobile (safety) service, depending on the class, size, cargo or intended voyage. Special radiocommunication equipment is similarly specified for use of survival craft. In other circumstances certain vessels navigating inland waters or approaches to harbours are required to be equipped to take part in the Vessel Traffic Management and Information Systems.

Vessels, not required by law to carry radiocommunication equipment, may be authorized to use equipment which is installed on a voluntary basis, but such equipment must meet DOC technical standards. The Department of Transport in Canada operates Land Stations which are the shore facilities for the Maritime Mobile (Safety) Service. These stations usually interface with the Public Commercial Land Telephone system. The Department of Transport has the responsibility of providing coast station facilities in all maritime areas of Canada and the various services provided by these stations will be expanded to meet international obligations and to keep up-to-date with technological advancements. Full details of the services provided by DOT coast guard stations are contained in the publication "Radio Aids to Marine Navigation" and obtainable from Printing and Publishing, Supply and Services Canada, Ottawa, Ontario K1A 0S9.

Vessels may also be licensed for participation in the Private Commercial Service as an extension of a land mobile system in a private system. Policy regarding the licensing of such stations is covered in PM-1-4.

RADIO LICENSINGTABLE OF CONTENTS

<u>PARAGRAPH</u>		<u>PAGE</u>
1.	Definitions - MARITIME MOBILE SERVICE	1
1.2	Eligibility for Licensing	2
1.3	Compulsory Fitted Ships Radiotelegraph	3
1.3.1	Radiotelephone	3
1.3.2	Land Mobile Frequencies	3
1.3.3	U.S. Coast Guard Frequency 2670 kHz	3
1.3.4	Portable Radio For Survival Craft and Motor Lifeboat Radiotelegraph Ship Stations ..	4
1.3.5	Vessel Traffic Management (VTM) System East Coast.....	5
1.3.6	Marine Traffic Control (MTC) System	6
1.3.7	Marine Information Service (MIS)	6
1.3.8	Vessel Traffic Management (VTM) Systems West Coast.....	6
1.3.9	Bands Between 156 and 174 MHz	7
1.4	Domestic Service	9
1.4.1	Private Commercial Service	9
1.4.2	Licensed to Common Carriers	10
1.4.3	150.05-174 MHz and 450-470 MHz Secondary to Land Mobile Service	10
1.4.4	Technical Requirements	11
1.4.5	Classes of Emission for Radiotelegraph	11
1.4.6	Radiotelephony in 1605 - 4000 kHz Band.....	12
1.4.7	Ships Transferred to Canadian Registry	23
1.4.8	Speech Scrambling	25
1.5	2182 kHz	26
1.5.1	Article 60 ITU	26
1.6	Ship Radiotelegraph 4-25 MHz	27
1.6.1	Radiotelegraph	27
1.6.2	Coast Guard Radio Stations 4-25 MHz	28

Definitions

1. MARITIME MOBILE SERVICES

- (a) Maritime Mobile Services: A mobile service between coast stations and ship stations, or between ship stations, or between associated on-board communication stations. Survival craft stations and emergency position-indicating radio beacon stations may also participate in this service.
- (b) Port Operations Service: A maritime mobile service in or near a port, between coast stations and ship stations, or between ship stations, in which messages are restricted to those relating to the operational handling, the movement and the safety of ships and, in emergency, to the safety of persons. Messages which are of a public correspondence nature shall be excluded from this service.
- (c) Coast Station: A land station in the maritime Mobile service.
- (d) Port Station: A coast station in the port operations service.
- (e) Ship Station: A mobile station in the maritime mobile service located on board a vessel which is not permanently moored, other than a survival craft station.
- (f) Survival Craft Station: A mobile station in the maritime mobile service or aeronautical mobile service intended solely for survival purposes and located on any lifeboat, life raft or other survival equipment.
- (g) Maritime Mobile-Satellite Service: A mobile-satellite service in which mobile earth stations are located on board ships. Survival craft stations and emergency position indicating radiobeacon stations may also participate in this service.
- (h) Maritime Radionavigation Service: A radionavigation service intended for the benefit and for the safe operation of ships.

(i) Ship Movement Service: A safety service in the maritime mobile service, other than a port operation service, between coast stations and ship stations, or between ship stations, in which messages are restricted to those relating to the movement of ships. Messages which are of a public correspondence nature shall be excluded from this service.

(j) On-board Communication Station: A low-powered mobile station in the maritime mobile service intended for use for internal communications on board a ship, or between a ship and its life-boats and life-rafts during life-boat drills or operations, or for communication within a group of vessels being towed or pushed, as well as for line handling and mooring instructions.

(k) Ship Earth Station: A mobile earth station in the maritime mobile-satellite service located on board ship.

(l) Radar Beacon (racon): A transmitter-receiver associated with a fixed navigational mark which, when triggered by a radar automatically returns a distinctive signal which can appear on the display of the triggering radar, providing range, bearing and identification information.

(m) Safety Service: Any radiocommunication service used permanently or temporarily for the safeguarding of human life and property.

Eligibility
for Licensing

1.2 Licences may be issued to an individual or corporation that meets the requirements of General Radio Regulations, Part I, Section V.

The licensee may also be authorized to operate secondary equipment in the Public Commercial and/or Private Commercial Service, provided the installation meets the applicable technical standard and will not cause interference to the operation of the primary equipment.

1.2.1 For details on the Public Commercial Service as applied in the Maritime Mobile Service refer to PM-1-5 (Public Commercial Service) and for associated vessel applications refer to PM-1-4.

Compulsorily Fitted Ships - Radiotelegraph

1.3 Ships required to carry radiotelegraph for safety purposes shall employ equipment capable of transmitting on the distress frequency 500 kHz, the direction finding frequency 410 kHz and at least two of the frequencies 425, 454, 468, 480, and 512 kHz using A1A, A2A, H2A modes of emissions as applicable. (Ship Station Technical Regulations, Section 26.)

Radiotelephone

1.3.1 Ships required to carry medium frequency radiotelephone for safety purposes shall carry at least 2182 kHz and one intership working frequency appropriate to the area.

Land Mobile Frequencies

1.3.2 Operation on land mobile frequencies may be authorized if the vessel is considered to be an extension of an existing land mobile service.

U.S. Coast Guard Frequency 2670 kHz

1.3.3 The frequency of 2670 kHz is available at most Coast Guard shore stations on both Coasts of the USA for radiotelephone communication with non-Coast Guard ships. The object is to provide a common ship/shore working frequency, and thus reduce the amount of non-distress traffic formerly conducted on the distress and calling channels of 2182 kHz. Coast Guard shore stations maintain a listening watch on 2182 kHz and request calling ships to shift to 2670 kHz for handling traffic of a non-distress nature.

Canadian Ship Use 2670 kHz

1.3.3.1 The U.S. Coast Guard encourages Canadian ships having a requirement to communicate with their shore stations to use 2670 kHz.

Coast Guard Lifeboat Station

1.3.3.2 The location of Canadian lifeboat stations may be obtained from the Regional Coast Guard office operated by the Canadian Department of Transport.

Lifeboat
Station
Not Adjacent
to Coast Guard
Station

1.3.3.3 Each lifeboat station is manned on a continuous basis, and alerting of an emergency situation is normally done through land telephone connection to the nearest marine radio station. As the lifeboat stations on the East Coast are not adjacent to marine radio stations, they are more dependent for alerting purposes on a continuous radio watch on 2182 kHz and 156.8 MHz.

The watch station is situated on the wharf to which the lifeboat is moored. The watch station has a transceiver and is manned at all times except when the lifeboat leaves the wharf.

Wharf Station
Included in
Ship Station
Licence

1.3.3.4 The radio facilities on the wharf are provided as an "extension of the vessel's radio station" and as such should be included in ship station licence. The vessel's licence should be endorsed as follows: "The licence includes a portable station on the wharf at _____". Lifeboats may also carry hand-held portables for use during a marine emergency.

Portable Radio
For Survival
Craft and Motor
Lifeboat Radio-
Telegraph Ship
Stations

1.3.4 Every radiotelegraph ship station required to be fitted on a motor lifeboat shall be capable of transmitting and receiving on 500 kHz and 8364 kHz employing A2A or H2A emissions. Portable radio apparatus for survival craft shall be capable of transmitting and receiving signals on the frequency 500 kHz, type A2A or H2A emissions and transmitting on 8364 kHz type A2A or H2A emissions or transmitting and receiving on 2182 kHz, type A3E and H3E emissions. (Ship Station Technical Regulations, Sections 56 and 57. I.T.U., 1982, Nos. 3001 to 3005.)

1.3.4.1 Several lifeboat portable equipments have appeared on the market, capable of operation on 2182 kHz only. The Department has no objection to the use of 2182 kHz lifeboat portable apparatus on ships not required by law to carry such apparatus.

8364 kHz

1.3.4.2 Equipment provided for use in survival craft stations shall if capable of operating on any frequency in the bands 4000 to 27500 kHz be able to transmit on 8364 kHz using class A2A emission. If a receiver is provided for any of these bands it shall be able to receive class A1A, A2A and H2A emissions throughout the band 8341.75-8728.5 kHz. 8364 kHz shall not be assigned to or used by ship stations except to establish communications relating to the safety of life. It is designated for use by survival craft stations if they are equipped to transmit on frequencies in the bands between 4000 and 27500 kHz and if they desire to establish communication with stations of the Maritime and Aeronautical Mobile Service, for search and rescue purposes. (I.T.U., 1982, No. 3005.)

RT/DF
Watch Receiver

1.3.4.3 Effective May 25, 1981 all Convention Ships engaged on international voyages are required to include as part of the radio installation a radiotelephone distress frequency watch receiver (RT/DFWR) to maintain a continuous watch on 2182 kHz. (Ship Station Radio Regulations, Section 4.)

Technical
Standards

1.3.4.4 The facility contains a dedicated frequency watch receiver pre-tuned to 2182 kHz. The receiver can be used with a loud speaker so all transmissions on the frequency can be heard, or as a filtered loud speaker which filters out transmissions on the frequency except the radiotelephone alarm signal. (SOLAS, 1974, Chapter IV, Regulation 16.)

Vessel Traffic
Management (VTM)
System
East Coast

1.3.5 The Department of Transport has instituted a Vessel Traffic Management System (VTM) in the area of the Strait of Canso, Nova Scotia, including Chedabucto Bay, St. George's Bay and approaches thereto. There are also VTM systems operating at Halifax harbour and approaches, Placentia Bay and approaches and the Bay of Fundy.

Marine Traffic
Control (MTC)
System

1.3.6 A Marine Traffic Control (MTC) system is in operation for the area extending from meridian of longitude passing through Sept-Isles to the upper limits of Montreal Harbour. Procedural information and a list of reporting points are contained in Annual Notice to Mariners, Notice #25. Commercial vessels of 7.5 meters (25 feet) and pleasure craft in excess of 20 meters (65 feet) in length shall comply with the frequencies specified for this service and listed in Radio Aids to Marine Navigation (publication TP146) Canadian Coast Guard Telecommunications.

1.3.6.1 Vessels approaching the meridian of longitude passing through Sept-Isles from the east should call Quebec Control Center using call sign "Channel Quebec" 156.7 MHz (Channel 14) for further instructions.

Marine
Information
Service (MIS)

1.3.7 There is also a voluntary Marine information Service in operation for the Canadian waters of Lake Erie between Long Point and South East shoal and Lake Huron north of Sarnia. In order to take advantage of the MIS and to avoid unnecessary delays, vessels transitting in these waters should call "Marine Info Ontario" on 156.6 MHz (Channel 12) in Lake Erie and 156.55 MHz (Channel 11) in Lake Huron for further information.

Vessel Traffic
Management
(VTM) Systems
West Coast

1.3.8 A similar VTM system is being developed for the British Columbia Coastal area. This system applies to all vessels of 20 meters (65 feet) or more in length, a towing vessel of 8 meters (26 feet) or more in length and vessels with tows which measure from the stern of the towing vessel to the stern of the last vessel or object towed 30 meters (98 feet) or more in length. For detailed information concerning operating procedures, sectors, reporting points, and frequencies assigned, mariners are requested to consult Notice #25, Section (7), Canadian Notices to Mariners 1976.

- Bands Between 156 and 174 MHz
- 1.3.9 The frequency 156.8 MHz is the international distress, safety and calling frequency for VHF radiotelephone stations in the Maritime Mobile Service. It is used for the distress signal, call and traffic, for the urgency signal and for the safety signal and call. Safety messages shall be transmitted where practicable on a working frequency after a preliminary announcement on 156.8 MHz. The class of emission to be used on the frequency 156.8 MHz shall be F3E.
- Other Uses for 156.8 MHz by Coast and Ship Stations
- 1.3.9.1 The frequency 156.8 MHz may also be used
- a) by coast and ship stations for call and reply in accordance with the provisions of Article 62 and 65 of the I.T.U., 1982.
 - b) by coast stations to announce the transmission on another frequency of traffic lists and important maritime information (see Nos. 4925 to 4929 of the I.T.U., 1982).
- Coast Station Watch 156.8 MHz
- 1.3.9.2 A coast station providing an international maritime mobile radiotelephone service in the band 156-174 MHz and which forms an essential part of the coverage of the area for distress purposes should, during its working hours in that band, maintain an efficient aural watch on 156.8 MHz (see Recommendation 306 of the I.T.U., 1982).
- Port Operations
- 1.3.9.3 The Canadian pilotage service makes use of the following VHF frequencies assigned, in general, to Port Operations:

Shore Station

<u>Frequencies</u>	<u>Channel</u>	<u>Purpose</u>
156.8 MHz	16	International distress Safety and Calling
156.55 MHz	11	Pilotage & Marine Traffic Control
156.6 MHz	12	Port Operations
156.7 MHz	14	Port Operations
156.85 MHz	17	Pilotage on West Coast.

Port Operations
Pilotage

Ship Station

<u>Frequencies</u>	<u>Channel</u>	<u>Purpose</u>
156.8 MHz	16	International distress Safety and Calling
156.55 MHz	11	Pilotage, Ship Movement Service
156.30 MHz	6	Intership communication
156.60 MHz	12	Port Operations
156.70 MHz	14	Port Operations
156.85 MHz	17	Pilotage on West Coast

Docking
Communications

1.3.9.4 Ship docking communication is recognized as part of the port operational service and may make use of the frequency 156.6 MHz for communication with pilots, tugs, etc., by means of "Walkie-Talkie" portable equipment. Other frequencies, as mentioned in the pilotage service above, as well as those listed in the Canadian Plan for VHF Maritime Mobile Radiotelephone Channels, may also be used.

Ship Station
Exempt from
Watch on
156.8 MHz

1.3.9.5 Ship stations, when in communication with a port station may, on an exceptional basis and subject to the agreement of the administration concerned, continue to maintain watch, on the appropriate port operations frequency only, provided that watch on 156.8 MHz is being maintained by the port station (see Nos. 3059 and 4400 of the I.T.U., 1982).

Coast Station
in Port
Operation
Not Exempt

1.3.9.6 A coast station in the port operations service in an area where 156.8 MHz is being used for distress, urgency or safety, shall during its working hours, keep an additional watch on 156.6 MHz or other port operations frequency indicated in heavy type in the List of Coast Stations published by I.T.U. (see No. 4402 of the I.T.U., 1982).

Ship
Movement
Service

1.3.9.7 Ship stations, when in communication with a coast station in the ship movement service and subject to the agreement concerned, may continue to maintain watch on the appropriate ship movement frequency only, provided a watch on 156.8 MHz is being maintained by that coast station (see Nos. 3060 and 4401 of the I.T.U., 1982).

Coast Station
in Ship
Movement
Service

1.3.9.8 A coast station in the ship movement service in an area where 156.8 MHz is being used for distress, urgency and safety shall, during its working hours, keep an additional watch on the ship movement frequencies indicated in heavy type in the List of Coast Stations (see 4403 of the I.T.U., 1982).

156.55 MHz
for MTC

1.3.9.9 From Montreal east to Sept-Isles the frequency 156.55 MHz has been allocated to the St. Lawrence Marine Traffic Control System and, is therefore, not available for pilotage communications in this area.

1.4 DOMESTIC SERVICE

Private
Commercial
Service

1.4.1 The domestic service type of radiocommunication set up between land and ship stations and limited to non-safety or private correspondence is covered in PM-1-4 "Private Commercial Service" or PM-1-5 "Public Commercial Service".

1.4.1.1 Any ship licensed under the Radio Act may be authorized to participate in the Public Commercial or Restricted Public Commercial Service and the licence may be endorsed accordingly.

1.4.1.2 Ships requiring only commercial services may be licensed under the Radio Act as a mobile station performing a Private Commercial Service.

Licensed to
Common Carriers

1.4.2 While it is desirable, in the interest of good spectrum management that land stations performing a ship/shore commercial service be licensed to common carriers, this does not preclude the granting of licences for Private Commercial Service to companies and/or individuals, at the discretion of the Department.

150.05-174 MHz
and 450-470 MHz
Secondary to
land mobile
service

1.4.3 Extensions of services of the land mobile service to vessels in the area may be authorized on frequencies assigned in the 150.05-174 MHz and 450-470 MHz bands, but on a secondary basis to the land mobile service.

1.4.3.1 Land Stations (Private Commercial Service) may be authorized on a special case basis to use frequencies within the bands specified in 1.4.3.2 for ship/shore simplex working on a secondary basis to the land mobile service.

Special Case
in Medium
Frequencies

1.4.3.2 Authority may be granted, on a special case basis, to use medium frequencies usually assigned to land mobile or fixed (point-to-point) for communication with ships owned by or directly associated with the licensee.

Technical Requirements

1.4.4 The following schedule covers the technical requirements for radio equipment installed on Canadian ships:

<u>Frequency Band Radiotelegraph</u>	<u>Compulsorily Fitted</u>	<u>Voluntarily Fitted</u>
200-535 kHz	Equipment shall be technically acceptable using RSS117 as a guide	Same as for compulsorily fitted
4-23 MHz	As above	Same as for compulsorily fitted

Radiotelephone

1.6-28 MHz (R3E, H3E, J3E)	Equipment shall be type-approved under RSS181	Same as for compulsorily fitted
156-162.5 MHz (See notes 1 & 2)	Equipment shall be type-approved under RSS182	Same as for compulsorily fitted

- 1) The carrier power of a ship station transmitter shall not exceed 25 watts for equipment placed in service after January 1, 1970.
- 2) Transmitters operating on 25 kHz channelling shall be capable of reducing the transmitted power to 1 watt or less.

Classes of Emission for Radiotelegraph

1.4.5 Where radiotelegraphy is used in the 405-535 kHz band A1A, A2A, H2A emissions may be used. However, H2A mode is desirable in the interest of reducing interference, in which case the upper side-band shall be used. This also applies where the use of MF and HF frequencies in the maritime mobile service is permitted.

Radiotelephony 1.4.6 Article 59 of I.T.U. Radio Regulations
1605-4000 kHz (1982 Edition) provides in part that:
Band

Types of Emission All ship stations equipped with the
radiotelephony apparatus to work in the authorized bands
between 1605 and 2850 kHz shall be able to

4127

4128

4129

4130

I.T.U. Radio
Regulations

- a) send class H3E emissions with a carrier frequency of 2182 kHz and receive class H3E emissions on a carrier frequency of 2182 kHz. Since 1 January 1982, it is no longer authorized to send class A3E emissions except for such apparatus provided solely for distress, urgency and safety purposes;
- b) send, in addition class R3E and J3E emissions on at least 2 working frequencies;

Emissions on at least two working frequencies are required (in certain areas, administrations may reduce this requirement to one working frequency);

- c) receive, in addition R3E and J3E emissions on all other frequencies necessary for their service.

2982
ITU

In the zone of Regions 1 and 2 south of latitude 15° N, including Mexico, and in the zone of Region 3 south of latitude 25° N, the carrier frequency 4 125 kHz is designated to supplement the carrier frequency of 2 182 kHz for distress and safety purposes and for call and reply (see also No. 520). Stations using the frequency 4 125 kHz may continue to use class H3E emission until 1 January 1984.

Implementation
of Single Side-
Band Techniques

1.4.6.1 The Canadian Maritime Mobile Service makes use of radiotelephony on medium and high frequencies in accordance with the allocations provided in Article 8 of the ITU Radio Regulations. The Canadian service provides for ship/shore communications through coast stations operated by the Department of Transport (DOT) or other public agencies. Moreover, non-safety ship/shore communications are provided through private shore facilities where the need exists. For details of the frequencies used by the DOT coast stations reference should be made to the Pacific, and Atlantic and Great Lakes editions of the DOT publication "Radio Aids to Marine Navigation". The details of private ship/shore and intership (SSB) communications may be found in PM-1-4.

Note: The guard band for 2182 kHz has been reduced to provide two new SSB channels (carrier frequency 2170.5 kHz and 2191 kHz). Emissions have been restricted to R3E and J3E. Transmissions are limited to a peak envelope power of 400 watts.

DSB equipment licensed prior to April 1, 1971, (the effective date of SSB Radio Standards Specification 181) continued to be licensed until the dates listed in the following transition schedule:

	<u>MF Band</u> <u>1605 to 4000 kHz</u>	<u>HF Band</u> <u>4000 to 23000 kHz</u>
1) Date after which <u>new</u> installation of DSB equipment in ships ceased to be permitted	1 January 1973	1 January 1972
2) Coast stations discontinued DSB emission as of	1 January 1975	1 January 1972
3) Date after which <u>only</u> SSB emissions (reduced carrier R3E or suppressed carrier J3E) will be permitted on vessels compulsory fitted with radio-telephone)	1 January 1978	1 January 1978
4) Date after which <u>only</u> SSB emissions (reduced carrier R3E or suppressed carrier J3E) will be permitted on vessels voluntarily fitted with radiotelephone	1 January 1982	1 January 1978

It should be noted that emissions from the distress and calling frequency of 2182 kHz will be in the full carrier (compatible) mode indefinitely. The guard band for 2182 kHz has been reduced to provide two new SSB channels, with emissions on these adjacent channels being restricted to partial or suppressed carrier and a maximum power of 400 watts.

1.4.6.2 Dates Regarding the Implementation of
25 kHz Channelling in the Maritime Mobile Service Band
156-174 MHz

Implementation
Dates for 25 kHz
Channelling in the
156-174 MHz Band

1. July 1, 1971
New installations were required to meet Radio Standards Specification (RSS) 182. Existing broadband equipment may continue in operation to be licensed until December 31, 1977.
2. January 1, 1978
All Coast and Ship Stations are to comply with RSS 182.
3. Foreign ships were required to "narrow band" transmissions as of January 1, 1973; however, they may continue to use broadband receivers until January 1, 1983.

1.4.6.3 Canadian Plan for VHF Maritime Mobile Radiotelephone Channels

CHANNEL DESIGNATORS	Transmitting Frequencies (MHz)		FUNCTION AND TYPE OF TRAFFIC
	Ship Stations	Coast Stations	
* 65A	156.275	156.275	Simplex I/S & S/S - Port Operations
06	156.300	---	I/S (RR Note h)
* 66A	156.325	156.325	Simplex I/S & S/S - Port Operations
* 07A	156.350	156.350	Simplex I/S & S/S - Commercial
67	156.375	156.375	Simplex I/S & S/S - Commercial and Non-Commercial (RR Note n)
08	156.400	---	I/S - Commercial
68	156.425	156.425	Simplex I/S & S/S - Non-Commercial (Recreational Craft - Marinas - Yacht Clubs) (RR Note p)
09	156.450	156.450	Simplex I/S & S/S - Commercial/Non-Commercial (Assigned Vessel Traffic Movement) (Use St. Lawrence River Area) (RR Notes c, o)
69	156.475	156.475	Simplex I/S & S/S - Non-Commercial (RR Note p)
10	156.500	156.500	Simplex I/S & S/S - Commercial (Assigned Vessel Traffic Movement) (Use St. Lawrence River Area) (RR Note n)
70	156.525	---	Simplex I/S - Non-Commercial (Recreational Craft) (RR Note c, o)
11	156.550	156.550	Simplex I/S & S/S Ship Movement (VTM) (RR Note p)
71	156.575	156.575	Simplex I/S & S/S - Non-Commercial (Recreational Craft, Marinas) (RR Note p)

CHANNEL DESIGNATORS	Transmitting Frequencies (MHz)		FUNCTION AND TYPE OF TRAFFIC
	Ship Stations	Coast Stations	
12	156.600	156.600	Simplex I/S & S/S - Ship Movement (VTM) (RR Note p)
72	156.625	---	
13	156.650	156.650	Simplex I/S & S/S - Ship Movement (VTM) (RR Note p)
73	156.675	156.675	Simplex I/S - S/S Commercial and Non- Commercial (RR Note N)
14	156.700	156.700	Simplex I/S & S/S - Ship Movement (VTM) (RR Note p)
74	156.725	156.725	Simplex I/S & S/S - Ship Movement (VTM) (RR Note p)
15	156.750	156.750	Simplex - I/S & S/S Government Operations (RR Notes g, 1)
75	---	---	Not available - Guard Band for Channel 16
16	156.800	156.800	Distress Safety and Calling
76	---	---	Not available - Guard Band for Channel 16
17	156.850	156.850	Simplex I/S & S/S - Pilotage (RR Notes g, 1)
77	156.875	156.875	Pilotage - Simplex - I/S & S/S
* 18A	156.900	156.900	Simplex I/S & S/S - Commercial (See note f)
* 78A	156.925	156.925	Simplex I/S & S/S - Commercial
* 19A	156.950	156.950	Simplex I/S & S/S - Commercial - (Presently used by Canadian Coast Guard) (See note f)
* 79A	156.975	156.975	Simplex I/S & S/S - Commercial (RR Notes f, p)
20	157.000	161.600	Duplex S/S - Port Operations (RR Note f, p)
* 80A	157.025	157.025	Simplex I/S & S/S - Commercial (RR Notes f, p)
* 21A	157.050	157.050	Simplex I/S & S/S - Federal Government Use (Joint Canadian & U.S. Coast Guard) (RR Note f)

CHANNEL DESIGNATORS	Transmitting Frequencies (MHz)		FUNCTION AND TYPE OF TRAFFIC
	Ship Stations	Coast Stations	
* 21B		161.650	Continuous Marine Broadcasts (Canadian Coast Guard)
* 81A	157.075	157.075	Simplex I/S & S/S - Federal Government Use (Joint Canadian & U.S. Coast Guard - Anti-Pollution)
* 22A	157.100	157.100	Simplex I/S & S/S - Federal Government Use (Joint Canadian & U.S. Coast Guard - Liaison channel for communication between Coast Guard and Non-Coast Guard stations) (RR Note f)
* 82A	157.125	157.125	Canadian Coast Guard/U.S. Government Agencies
23	157.150	161.750	Duplex S/S - Public Correspondence
* 83A	157.175	157.175	Canadian Coast Guard/U.S. Coast Guard and other Government Agencies
* 83B		161.775	Continuous Marine Broadcast (Canadian Coast Guard) except on the West Coast (I/S & S/S)
24	157.200	161.800	Duplex S/S - Public Correspondence
84	157.225	161.825	Duplex S/S - Public Correspondence
25	157.250	161.850	Duplex S/S - Public Correspondence
85	157.275	161.875	Duplex S/S - Public Correspondence
26	157.300	161.900	Duplex S/S - Public Correspondence
86	157.325	161.925	Duplex S/S - Public Correspondence (RR Note q)
27	157.350	161.950	Duplex S/S - Public Correspondence
87	157.375	161.975	Duplex S/S - Public Correspondence
28	157.400	162.000	Duplex S/S - Public Correspondence
88	157.425	162.025	Duplex S/S - Public Correspondence

For information regarding Channels 01 to 05 and 60 to 64 inclusive, see Notes 1, 1A, 2 & 3.

For information on U.S./Canada co-ordination, see Note 4.

- * The addition of the letter "A" to the channel designator indicates that in Canada the channel is restricted to simplex operation using the frequency assigned to the ship station. The addition of the letter "B" to a channel designator indicates that in Canada the use of the channel is restricted to weather receive only on the frequency assigned to the coast station.

ITU Radio
Regulation
Notes Referring
to Canadian
VHF Plan

1.4.6.3.1

a) Administrations may designate frequencies in the intership, port operations and ship movement services for use by light aircraft and helicopters to communicate with ships or participating coast stations in predominantly maritime support operations under the conditions specified in Nos. 4144, 4148, 4149, 4150, 4151, 4152 and 4153 of the I.T.U. However, the use of the channels which are shared with public correspondence shall be subject to prior agreement between interested and affected administrations.

b) Except in the United States of America, the channels of Appendix 18, preferably two adjacent channels from the series 87, 28, 88, with the exception of 06, 15, 16, 17, 75 and 76, may be used for narrow-band direct-printing telegraphy and data transmission, subject to special arrangement between interested and affected administrations.

c) The two-frequency channels for port operations (18, 19, 20, 21, 22, 79 and 80) may be used for public correspondence, subject to special arrangement between interested and affected administrations.

d) Until 1 January 1983, the effective radiated power of ship stations on channels 15 and 17 shall not exceed 1 W. (Not available in Canadian waters for on-board communications)

2993 and
4154
ITU Radio
Regulations

e) The frequency 156.300 MHz (channel 06) (see Nos. 2993 and 4154 I.T.U.) may also be used for communication between ship stations and aircraft stations engaged in coordinated search and rescue operations. Ship stations shall avoid harmful interference to such communications on channel 06 as well as to communications between aircraft stations, ice-breakers and assisted ships during ice seasons.

f) Channels 15 and 17 may also be used for on-board communications provided the effective radiated power does not exceed 1 W, and subject to the national regulations of the administration concerned when the channels are used in its territorial waters. (However, see ITU Recommendation No. 305) (Not available for on-board communications in Canadian waters.)

g) Within the European Maritime area and in Canada these frequencies (channels 10, 67, 73) may also be used, if so required, by the individual administrations concerned, for communication between ship stations, aircraft stations and participating land stations engaged in coordinated search and rescue and anti-pollution operations in local areas, under the conditions specified in Nos. 4144, 4148, 4149, 4150, 4151, 4152 and 4153 of the I.T.U.

h) The preferred first three frequencies for the purpose indicated in Note c) are 156.450 MHz (channel 09), 156.525 MHz (channel 70) and 156.625 MHz (channel 72).

i) These channels (68, 69, 11, 71, 12, 13, 14, 74, 79; 80) are the preferred channels for the ship movement service. They may, however, be assigned to the port operations service until required for the ship movement service if this should prove to be necessary in any specific area.

j) This channel (86) may be used as a calling channel if such a channel is required in an automatic radio-telephone system when such a system is recommended by the C.C.I.R.

NOTE 1

Fishing
Industry

Channels 01 to 05 and 60 to 64 inclusive, with the exception of Channels 61A, 62A and 04A (Simplex), which have been made available to the fishing industry on the east coast, plus some other spot frequencies which have been omitted from this plan, are not available for maritime mobile use at this time.

NOTE 1A

Channels 67, 69 and 73 have been sub-allocated to the east coast fishing industry on a conditional basis subject to review and/or withdrawal, should the channels be required at a later date for safety purposes.

NOTE 2

The frequencies referred to in NOTE 1 are for the most part being used in the United States and Canada for land mobile communications, e.g., railroads safety services, broadcast pickup, etc. However, as conditions change these channels may be made available for use in the Maritime Mobile Service.

NOTE 3

In areas where the frequencies are not in use by the railways or other agencies and are unlikely to be required for such purposes, they may be considered for assignment in the Maritime Mobile Service on a case by case basis.

NOTE 4

All I.T.U. Appendix 18 frequencies are subject to Canada/U.S. coordination when they are proposed for use at coast and land stations within Canada/U.S. coordination zone.

Method of
Assigning
SSB Channels

1.4.6.4 The assigned frequency of a single sideband channel of a station in the maritime mobile radio-telephone service is 1.4 kHz higher than the carrier frequency.

Regions 2
and 3 use of
2635 kHz and
2638 kHz

4193
ITU Radio
Regulations

1.4.6.5 In Region 2 and 3, the carrier frequencies 2635 kHz (assigned frequency 2636.4 kHz) and 2638 kHz (assigned frequency 2639.4 kHz) are used as single sideband intership radiotelephony working frequencies in addition to the frequencies prescribed for common use in certain services. The carrier frequency 2635 kHz should be used with class R3E and J3E emissions only. The carrier frequency 2638 kHz may be used with class A3E, H3E, R3E and J3E emissions. However, after 1 January 1982 class A3E and H3E emissions are no longer authorized. In Region 3 these frequencies are protected by a guard band between 2634 and 2642 kHz.

On-Board
Communications

1.4.6.5.1 In the Maritime Mobile Service, the frequencies 457.525, 457.550, 457.575 MHz, 467.525, 467.550 and 467.575 MHz may be used by on-board communication stations. However, in Canada, United States and the Philippines the preferred frequencies for use by on-board communications stations shall be 457.525, 457.550, 457.575 and 457.600 MHz paired respectively with 467.750, 467.775, 467.800 and 467.825 MHz using F3E emission. (Article 8, 670, I.T.U.)

Class of
Emission
Coast Stations

4373
ITU

1.4.6.6 Coast radiotelephone stations employing class R3E, or J3E emissions in the bands between 4000 and 23000 kHz shall use the minimum of power necessary to cover their service area and shall at no time use a peak envelope power in excess of 10 kW per channel.

Class of
Emission
Ship Stations

4374
ITU

1.4.6.7 Ship radiotelephone stations employing class R3E or J3E emissions in the bands between 4000 and 23000 kHz shall at no time use a peak envelope power in excess of 1.5 kW per channel.

RTTY and
Data
Transmissions
(VHF)

1.4.6.8 Applications for narrow-band direct printing telegraphy and data transmissions on maritime VHF channels (see para. 1.4.6.3.1 b) may be accepted and forwarded to Headquarters for co-ordination with the U.S. on a case-by-case basis. Applicants should be advised of the 3000 hertz bandwidth limit and that any authority granted will be on a secondary basis to the primary service.

RTTY and
Fax
Transmissions
(HF)

1.4.6.9 Applications for wide band RTTY and Fax transmissions on maritime HF frequencies may be accepted. Frequencies to accommodate these transmissions would be assigned from the bands listed in ITU Appendix 31.

Technical Requirements

Ships Trans-
ferred to
Canadian
Registry

1.4.7 The application of Radio Standards Specifications in respect of ship station radio installations where such stations were licensed for participation in the International Maritime Mobile Service, by a Foreign administration up to the time of ship transfer to Canadian Registry, is as follows:

Radiotelegraph
Equipped
Ships

1) The Department will accept for licensing, equipment that meets the Safety of Life at Sea Convention requirements as evidenced by the issuance of a Safety Radiotelegraph Certificate or equivalent document by the foreign administration; and

Radiotelephone
Equipped Ships

2) a) Compulsorily fitted: Equipment shall normally meet RSS 181. However, where radiotelephone equipped vessels are transferred to Canadian Registry with equipment that meets our operational and power requirements (100W) and also is assessed by District or Regional offices to be equivalent or superior to RSS 181, equipment may be accepted for licensing at the discretion of Regional or District personnel,

b) Voluntarily fitted: Equipment is acceptable for licensing, as an existing station on a continuing basis, provided that the equipment was previously licensed by a foreign administration and that it complies with our general operational requirements.

Coast Stations

1.4.7.1 The technical requirements for land stations in the Maritime Mobile Service are:

<u>Frequency</u> <u>Band</u>	<u>Emission</u>	<u>Specification</u>
*14-160 kHz	A1A & F1B	Radio Standards Procedure 100 using Radio Standards Specification 117 as a guide
200-535 kHz	A1A, A2A H2A	Radio Standards Procedure 100 using Radio Standards Specification 117 as a guide
1.6-28 MHz	R3E, H3E J3E	Radio Standards Specification 181
156-162.05 MHz	F3E	Radio Standards Specification 182

* Limited to coast stations using radiotelegraph (A1 & F1 only) exceptionally, the use of Class A7J emission is permissible subject to the necessary bandwidth not exceeding that normally used for class A1 or F1 emissions.

Ship Stations

1.4.7.2 The technical requirements for ship stations in the Maritime Mobile Service are:

<u>Frequency</u> <u>Band</u>	<u>Emission</u>	<u>Specification</u>
200-535 kHz	A1A, A2A H2A	Radio Standards Procedure 100 using Radio Standards Specification 117 as a guide
1.6-28 MHz	R3E, H3E J3E	Radio Standards Specification 181
156-162.05	F3E	Radio Standards Specification 182

NOTE: Existing equipment operating in the Maritime Mobile Service not type-approved under RSS 181, 182 or type acceptable using RSS 117 as a guide, may be licensed on a continuing basis up until amortization dates have been reached.

Speech Scrambling

1.4.8 Speech Scrambling equipment may be authorized in the Maritime Mobile Service, on a case-by-case basis only, on domestic intership frequencies provided the following requirements are met:

Vessels Equipped With MF/HF

- 1) The proposed speech scrambling equipment is also capable of clear speech transmissions;
- 2) The use of the proposed equipment will not degrade the operation of the transmitter or result in excessive bandwidth;
- 3) Calling and identification of the station (vessel) must be in clear speech;
- 4) Applications proposing the use of speech scrambling equipment shall be supported by complete technical data of the equipment involved; and

- 5) Provision shall be made for a standard voice microphone to by-pass the speech scrambler on all frequencies other than the Canadian intership frequencies.

1.4.8.1 When authorized, the speech scrambling equipment may be used only on the intership frequencies, on a temporary non-interference basis to regular maritime communications.

1.4.8.2 The use of speech scrambling equipment is prohibited on 2182 kHz, ship/shore working frequencies and it is considered that such equipment should not be permitted on any international intership medium frequency, e.g., 2638, 2738 kHz.

Vessels
Equipped
With VHF

1.4.8.3 The use of speech scramblers by fishing vessels on intership and ship/shore VHF channels may be authorized if an additional facility, for continuous monitoring of 156.8 MHz or the appropriate V.T.M. frequency, for the reception of clear speech is provided. This requirement would apply primarily to fishing vessels of more than 20 metres or more in length. The above condition also applies to speech scramblers authorized on board voluntarily fitted fishing vessels; however, their use should be limited to non-safety communications on intership and ship/shore private commercial channels.

2182 kHz

1.5 All emissions on the distress and calling frequency 2182 kHz will be in the full carrier (A3H) compatible mode indefinitely.

Article 60
ITU

1.5.1 Article 60 of the ITU Radio Regulations, (edition of 1982) contains general provision relating to the use of frequencies for radiotelephony in the Maritime Mobile Service. In the case of duplex radiotelephony in the bands between 4000 and 23000 kHz, the frequencies of emission by coast stations and ship stations shall be associated in pairs in accordance with Appendix 16 and the associated Table.

Ship Radiotelegraph 4-25 MHz 1.6 Table of Frequencies Assignable to Ship Radio Telegraph Stations Using Manual or Automatic A1A Morse in the Exclusive Maritime Mobile Bands Between 4 and 25 MHz

Radiotelegraph 1.6.1 Canadian ships handling traffic in the high frequency bands are authorized to use the following working frequencies by June 1, 1976. (Appendices 31-5 and 35-1 I.T.U. R.R. 1982)

Working Frequency Series Appendices 31-5 and 35-1 I.T.U. Radio Regulations	SERIES 1	SERIES 14	SERIES 34	SERIES 44	SERIES 49
Series	4188.5	4195	4205	4210	4212.5
Appendices 31-5 and 35-1 I.T.U. Radio Regulations	6282.75	6292.5	6307.5	6315	6318.75
	8377	8390	8410	8420	8425
	12565.5	12585	12615	12630	12637.5
	16754	16780	16820	16840	16850
	22268	22285	22290	22295	22300

Calling Frequencies Appendix 34 I.T.U. Radio Regulations 1.6.1.2 Canadian ships changeover to the following new calling frequencies by May 31, 1977.

CH.	<u>GROUP I</u>			<u>COMMON CHANNELS</u>			<u>GROUP III</u>		
	West Coast and Western Arctic						East Coast and Eastern Arctic		
4	4181.4	5	4181.8	6	4182.2	11	4184.2		
4	6272.1	5	6272.7	6	6273.3	11	6276.3		
4	8362.8	5	8363.6	6	8364.4	11	8368.4		
4	12544.2	5	12545.4	6	12546.6	11	12552.6		
4	16725.6	5	16727.2	6	16728.8	11	16736.8		
2	22230	3	22232	4	22234	8	22242		

Coast Guard
Radiotelegraph
4-25 MHz

1.6.2 Canadian Coast Guard radio stations provide an International radiotelegraphic service on the following frequencies:

<u>Call Sign</u>		<u>Transmit</u>
VFC	Cambridge Bay	6351.5 12671.0
VFF	Frobisher Bay	4236.5 6493.0 8443.0 12671.0
VCS	Halifax	4285.0 6491.5 8440.0 12874.0 16948.5 22387.0
VFA	Inuvik	6335.5
VAI	Vancouver	4235.0 6493.0 8453.0 12876.0 17175.2

The above coast guard stations receive on the ship station frequencies listed in paragraphs 1.6.1 and 1.6.1.2.