



Government of Canada  
Department of Communication

*DT*  
IDENTIFICATION AND ANALYSIS  
  
OF  
  
DATA ITEMS  
  
FOR  
  
ASSIGNMENT LICENSING  
  
OF THE  
  
SPECTRUM MANAGEMENT SYSTEM *S*  
  
SMS / ALS

Task Force Members

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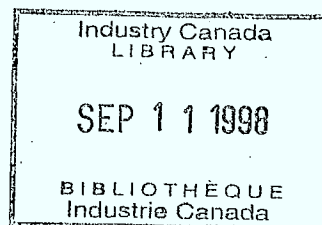
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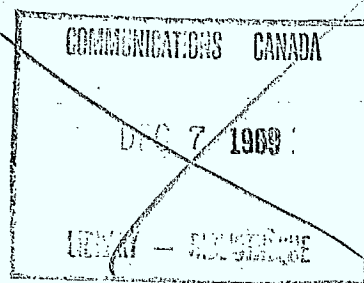
## PREFACE

This Study was initially conceived as a review of the data elements presently required in the Domestic Frequency List to determine additional data requirements and/or delete or change data elements and definitions no longer applicable. Shortly thereafter the Spectrum Management Proposal was developed, presented and accepted and the terms of reference and objectives of this Study were extended to reflect these new requirements. The following Study Report gives a basic consensus on regional HQ operational database requirements, database element names and accepted definitions.

It is the firm belief of all members of the Study team that the list of data items, definitions and specifications given herein should become the source of data for all Spectrum Management System developments.

## TASK FORCE MEMBERS

Parke L. Davis  
Micheline Chase  
Ed Leaver  
Klaus Haider



December 9, 1975

SPECTRUM MANAGEMENT SYSTEM - ASSIGNMENT LICENSING SYSTEM (SMS/ALS)

DATA ITEM IDENTIFICATION AND ANALYSIS

The objective of the Spectrum Management System - Assignment Licencing System is to establish one integrated database containing all data items presently contained in the Domestic Frequency List (DFL) and the Integrated Radio Station Licencing System (IRLS), and to extend the data content by the technical and administrative data required so that this database will fulfill all the functions of the existing two (2) systems, EMC and ESS requirements, coordination and notification requirements and provide a basis for spectrum planning.

The objective of the study was to identify data requirements which should be maintained in a master database to serve the technical, operational, and management needs of the Spectrum Management System (SMS). (An outline of the SMS proposal is included in Appendix P).

This study, conducted with substantial input from regional staff, has identified the data items required in the SMS/ALS.

Concentrated effort is required in the following areas: data accuracy, data availability, standardization of licensing forms, (i.e. application, requisition and licencing forms) procedures and data items, data gathering process. This work should commence immediately and involve the specialized areas in headquarters and regional offices dealing with the specific items.



SUMMARY

During the review, problems with the present systems, procedures, standards of information and documents were highlighted and some of the required improvements are indicated. This information is included in summary form so that the SMS project team can consider and initiate action to improve existing systems as well as consider these points in the design of new systems. The existing systems were established with minimum involvement by operations staff, previous systems were converted into the present systems without necessary consideration of the overall effects of accepting previous data without total edits, and the operational requirements were not adequately evaluated. The workflow, operation, file contents and reports available from the present systems were not adequately explained to operations staff. The file and systems design of the two present databases were such that these systems could not always be responsive to present user needs. Data existing when the two systems became operational was for the most part dumped from the existing systems without improvement in quality or sufficient standardization. Rather expensive systems have resulted in which regional operations staff have little interest, since they do not accommodate many of their needs. Consequently a low level of commitment to maintain these systems exists.

This review and the development of the SMS for operational needs based on regional input, has increased regional enthusiasm, even though it is realized that it will require initially substantial additional effort. It has also crystallized the regional awareness of the many areas in present systems that require improvements. The expressed regional view is that between now and the implementation of the SMS the present systems and procedures should be improved to involve regions in the computerized systems process and ease the eventual implementation. In this context a significant expressed or implied regional statement was "the SMS sounds like the system of the future, but being able to receive update maintenance reports from the IRLS so that we can verify actual correct inputs, would add significantly to our confidence that we are moving towards a new and better system".

The regional comments in regard to some of the features expected from the SMS are included and should be considered in the design of the SMS which can only be built with continuous regional operations involvement.

#### METHODOLOGY

During 1974 a project team comprised of K. Holt, K. Haider and E.H. Leaver compiled an outline entitled "PRELIMINARY OUTLINE OF DATA TO BE INCLUDED IN THE NEW DOMESTIC FREQUENCY LIST". In late 1974 a project team consisting of P.L. Davis, M. Chase, K. Haider, E.H. Leaver was established to review this outline and expand it to provide the basis for the Spectrum Management System (SMS) Data Base. This was completed in early 1975 keeping in mind the objectives of the SMS Data Base; namely to facilitate Radio Station Licensing, Frequency Registration, ITU Notification, Canada - U.S. Coordination and to serve as a Data Base for Electro-Magnetic Compatibility Studies and Spectrum Planning in headquarters and regions. The "Preliminary Outline of Data to be Included in the New Domestic Frequency List" and the data definitions were developed from the present data bases (DFL, IRLS), the Master International Frequency Register and data requirements specified to satisfy the SMS objectives.

The preliminary outline was mailed to the five regional offices for consideration and comments, followed by two-day meetings in each regional office. The purpose of these meetings with regionally selected representatives (see listings p. 19 and 20) was to discuss present systems, data requirements of the proposed SMS, and to obtain comments and suggestions from operating management.



The information and comments received during the five regional meetings were summarized and compiled into a volume entitled "Data Base Elements for Proposed SMS/ALS System". A meeting between the project team and representatives from all five regions was then convened to discuss the proposal. The final data base contents, as outlined in this report, were subsequently compiled.

Meetings were also held with representatives of the Economic Policy and Statistics Branch (representing statistical needs for the policy area) in DOC as well as representatives of the Ministry of Transport and the Department of National Defense to inform them of our work, to obtain comments and identify additional data items.

For the purpose of this report the Data Elements were classified into the following ten categories:

1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION
2. FREQUENCY CONDITION AND USE
3. TRANSMITTING STATION AND SITE
4. TRANSMITTING EQUIPMENT
5. TRANSMITTING ANTENNA
6. RECEIVING STATION AND SITE
7. RECEIVING EQUIPMENT
8. RECEIVING ANTENNA
9. FREQUENCY COORDINATION AND SUPPLEMENTARY INFORMATION
10. SHIPS AND AIRCRAFT ONLY

Appendixes containing relevant references (i.e. further definition, radio regulations, etc.) are included.

ACCURACY OF AVAILABLE DATA (FOR FREQUENCY ASSIGNMENTS)

It was stated in certain regions that in high density areas many proposed assignments based on data available were later proven to be incompatible with existing Canadian Frequency assignments. This has resulted in 10-15% of proposed frequency assignments being rejected due to inadequate procedures and data.

EXISTING HEADQUARTERS SYSTEMS

The regional comments regarding the Domestic Frequency List (DFL) and the Integrated Radio Licencing System (IRLS) varied widely. There has never been sufficient detailed orientation of the regions concerning workflow, procedures of inserting data, data and coding capability. In fact the existing systems were not built with a view toward operational efficiency and data accuracy. The relationship of the two systems and formalized procedures for the correction of errors have not been established. Some regions stated that the DFL was their major source of data for assignment purposes while others stated that the DFL was non-current and considered the rate of errors too excessive to utilize it as their major data source for assignment purposes. The DFL is non-current because reports are produced on a schedule basis and a definite time lag exists between authorization and data entry necessitating an interim data file at the assignment level. The errors and discrepancies result from the present updating procedures combined with the data entry methods.

The IRLS processing was criticized heavily and it was stated that up to 50% of all licences produced every five years contained one or more errors. There was general feeling that a percentage of all changes submitted to the IRLS never enter the system or that they enter the system with errors. As such all regions demanded an IRLS update report so that they could readily verify that changes had actually and correctly updated the IRLS. At the present time changes are submitted and it is only at the five year licensing cycle that discrepancies become obvious. For licensed stations, the DFL only receives changes after they have been entered into the IRLS. Due to lack of direct feedback both systems are suspect in relation to accuracy and completeness.

#### REGIONAL RECORDS OR SYSTEMS

All regions maintain manual files of their frequency assignments. Central Region has established a computer file of frequency assignment data for the VHF/UHF portion of the spectrum. Regional opinions in regard to the accuracy and the state of currency of their manual files varied. Toronto district office has been conducting a pilot project of inspection of stations and has compared their findings to their manual file records. In the relatively small sample (50 Base Stations in downtown Toronto) completed at time of our discussions it was established that up to 60% of their manual records showed significant discrepancies as determined through on-site inspections. In many cases co-ordinates given on original applications were in error, transmission line and antenna changes had been made without departmental knowledge and in some cases the station had actually been relocated. While some regions feel that their manual records are quite accurate others expressed that they are not.



Further evaluation is required to determine the level of accuracy of the regional records.

## OBSERVATIONS AND RECOMMENDATIONS

### DATA AVAILABILITY AND ACCURACY

The available information in the DFL/IRLS systems and in the regions represents a portion of the data requirements of the SMS. As indicated by the pilot project in Ontario region a large portion of the information in the present files may be inaccurate.

It is therefore recommended that:

1. A program of consolidating, standardizing information and data gathering be commenced in the regions to accommodate the SMS data requirements. The complete data as outlined in this report should be collected for entry into the SMS when it is developed.

### LICENCE DOCUMENT

Some regions expressed the opinion that the present licence document and the legal representation of data and the terms of the license were not adequate for enforcement purposes. Other suggestions were that information on the licence document varied and in many cases did not provide complete information (i.e. mobile licences do not consistently show bandwidth and type of emission; computer printed headings and data at the bottom of the licence document are difficult to interpret).

It is therefore recommended that:

2. A review of the information and its representation on the license document to satisfy both Departmental information needs and legal requirements of enforcement be initiated.

STANDARDIZATION OF FORMS, PROCEDURES AND DATA ITEMS

At present seven (7) different licence application forms for the different radio services exist, which contain a common core of information and additional information depending on the service. But even items common to all or most of these services are not standardized and the procedures as described in the manual guiding their completion, differ in their level of being up-to-date. Also the standards of data used in the IRLS do not agree with the standards used in the DFL. With the future data items as identified in this report, standardization of the application forms to facilitate input of required information and coded data entry with the associated revision of the manual should commence.

It is therefore recommended that:

3. Under the management of the SMS project group, sub-groups be established and charged with the responsibility of standardizing all forms, definitions and procedure manuals relating to IRLS/DFL with a view towards the SMS and this process should be completed prior or at least simultaneously with the detailed design of the SMS.



INCLUSION OF GENERAL RADIO SERVICE (GRS) IN SMS

Some regions expressed the view that it may be of benefit to include GRS in the SMS. Consequently the study team asked the regions to consider the advisability of including GRS and submit their views in writing by July 15, 1975. As of late August only two regional reports had been received from Ontario and Pacific region.

Ontario Region states:

"GRS was originally intended to provide an efficient means for commercial establishments to obtain licences without the involved proceedings necessary in acquiring, for example, a private commercial licence. However, the ease in which persons can obtain a GRS licence has allowed an increasingly larger number of hobbyists to make use of the service. In the Ontario region, as of June 1975, 48,031 GRS licencees exist, which is an increase of approximately 57% over the June 1974 figure of 30,603. In view of this growing workload, parts of the present manual system should be automated".

Pacific Region states:

"The attached cost benefit analysis shows that even the most carefully designed system for computerizing GRS licencing records will save little District Office time or money over the present manual GRS licencing system".

During our regional review we recall at least one other region stating that the GRS growth of assignments was spectacular. Therefore, a detailed evaluation and overall cost benefit study should be conducted.

It is therefore recommended that:

4. A study regarding the inclusion of a limited GRS data file in the SMS be conducted. The GRS licencing and renewal process should be considered as a regional option.

#### DATA GATHERING PROCESS

Several possible data gathering methods were discussed. The advisability of sending questionnaires directly to all licensees was discounted. A similar attempt by U.S. authorities failed. The information in the existing IRLS/DFL systems should be improved through standardization between the two systems and by providing IRLS maintenance - update feedback to region and district offices. The data gathering process for the VHF/UHF system would provide additional current information. The regions could supplement their manual files with on-site inspections. The new SMS data base could then be created from the present IRLS/DFL systems and the VHF/UHF system.

It is therefore recommended that:

5. Further evaluation be made to decide the final feasible data gathering method based on available regional resources. Starting immediately the present IRLS/DFL systems should be improved and updated.

REGIONAL ACCESS TO SMS

The regional review confirmed the desire to operate in accordance with the headquarter plans for a largely regionally operated SMS. The authorizing office would be the only location of a manual file containing licence application - legal documents, and supporting documentation as well as licence copy. Regional and district offices would be connected to the central data base in as interactive a mode as volumes permitted. Initially high volume locations would have intelligent terminals and low volume offices facsimile or other cost effective means with the possibility of lower cost terminals for intermediate offices. Most of the input would be from the authorizing offices with only the centralized functions (i.e. coordination) from headquarters. Only authorizing offices responsible for the assignment can provide input, with safeguards to permit read only access to other offices. Only input to EMC portion of system would be on-line, with all other updates and feedback operating in batch mode overnight from and to cassette storage media.

Security and update safeguards will have to be considered closely and true on-line changes to major files will be unlikely, and rather as in the case of EMC, it will be more prudent to create a daily sub-file which then would update the master overnight in batch mode. Data reports would be produced on a scheduled and on an as required (ad hoc) basis. The system once established should be monitored by a headquarter group on a day-to-day basis using total update and error listings so as to assure adherence to procedures, standards and quality of data.



It is therefore recommended that:

6. With this concept in mind thorough hardware, software and systems evaluations be conducted with close involvement of headquarter and regional staff, so as to build a cost effective system that will satisfy operational and headquarters requirements.

WORK REQUIRED TO IMPROVE PRESENT SYSTEMS

Additional work is required in improving the present methods and systems so as to enable a transition to the SMS. The study team would envisage an almost immediate establishment of network groups with the responsibility for areas within the present systems and reviewing, improving and in some cases computerizing lists, tables, etc. to facilitate the transition. Examples of areas requiring attention are:

a) COMPUTERIZED EQUIPMENT LIST

Presently the equipment list is based on a manual system.

Standard data in accordance with the SMS should be defined and then the present manual system should be computerized.

b) COMPUTERIZED SPECTRUM ALLOCATION TABLE

A computerized spectrum allocation table for domestic and international assignments has to be planned and developed.

c) DATA PROBLEMS WITHIN IRLS

Several data problems exist in the IRLS which must be corrected prior to any conversion. Some of these problems were identified during the conversion to the IRLS in 1972 but have not been corrected and include the following:

- The "individual or other" field did not exist in the old licence file so each record from the old system contains 9's instead of the "1 or 2" code.
- Most mobile records converted from the old file still do not contain emission and power in the fields provided by the new system (blank field).
- In the old system a typewritten page was attached to a licence if the number of frequencies could not be accommodated on the licence. Since these typewritten attachments were not in the computer system some of this information did not enter the new system. This requires identification and review of licences with large number of frequencies.
- The old system contained two fields for authorized communication/conditions, which in the IRLS are accommodated in one field, and were inserted into this field in their old form. Also stations contained on a single Municipal licence are identified in a rather non standardized manner in the authorized communications field. So this field requires update, correction and standardization to be meaningful.
- If in the IRLS the number of frequencies cannot be accommodated on one licence document a second licence containing the same information (i.e. call signs, company code etc.) but using a second licence number is prepared. As such two licences are used which creates problems in relating licences and licensees.

- A single station licence presently covers various locations within a 10 mile radius. Borderline cases and exceptions exist. Standard procedures should be established and adhered to.
- Additional updated/standardization of bandwidth to reflect necessary bandwidth is required; also the standard industrial code in the IRLS does not reflect the current Statistics Canada codes; also the IRLS system does not provide for transmitter power of less than 1 watt. All these areas require review, change and standardization.
- The EDIT SPECIFICATIONS presently used in the IRLS do not reflect the present standards that should be employed.

d) OTHER PROBLEMS OR QUESTIONS

These are miscellaneous items identified during the review which require further consideration and evaluation.

Problems

- The authorized communications/conditions field requires a definition and explanation of all items that presently appear or can appear in this field and their publication.
- Definite requirement exists for unique and additional fee notice address to be utilized in the present and future system for the fee accounting and automatic billing portion of the system. This is not accommodated in the IRLS and should be added if possible, but is a definite requirement for the SMS.
- All international agreements and treaties should be grouped in a master file and coded for reference purposes for the SMS, and updated as changes occur.

Questions

- Does a requirement exist to identify equipment in the SMS other than that which is presently identified as "additional equipment" on aircraft and ship station licences?
- Is the vessel type list complete and how for example are hovercraft accommodated?
- What is the requirement for VHF information on aircraft station licences? Are the A, B, C categories still applicable and/or are additional breakdowns required? Could these categories be superceded by an equipment identification and/or an auxiliary equipment characteristics list to be included in the SMS?
- Is the gross takeoff weight of 12,500 pounds still applicable and are there any requirements to identify aircraft with equipment capable of 25 KHZ channelling?
- What is the legal status of an individual holding a licence on behalf of another or of an organization? Who has legal status and actual responsibility and should this be continued in the SMS?
- Are there any reasons not to include the receive frequency as well as the transmit frequency on the station licence?

It is therefore recommended that:

7. The work items named in this section be considered and evaluated and responsible individuals or groups identified and charged with the improvements to the present systems wherever possible, but that all work items and questions together with any items identified during further analysis and design be given full consideration in the design of the SMS.

LIST OF ATTENDEES

In addition to the project team from DGTR (P.L. Davis, M. Chase, E.H. Leaver, K. Haider) which was present for all meetings the following individuals attended:

April 1-2 TORONTO

G.A. Beveridge	Supv. Spectrum Control - Ont. Reg.
V. Decloux	Manager Toronto District
J. Gavigan	Inspector Toronto District
S. Komlos	Supt. Spectrum Eng. - Ont. Reg.
J. Nosotti	Supv. Spectrum Control - Tor. Dist.
N. Ngoyen	Spectrum Engineer - Ont. Reg.
G. Rolston	Regional Engineer - Ont. Reg.
W.M. Stone	Supv. Authorization - Ont. Reg.
F. Ternoway	Supt. Radio Operations - Ont. Reg.
G. Wilson	Supv. Authorization - Tor. Dist.

April 3-4 WINNIPEG

G. Braha	Regional Comp. Syst. Admin.
R.A. Poirier	Reg. Supv. Special Projects
E.R. Shea	Reg. Manager Operations
H.D. Smith	Data Base Project Manager
H. Treffers	Reg. Supt. Engineering
I.E. Williams	Reg. Supt. Auth. and Oper. Standards

April 7-8 VANCOUVER

D.T. Black	Reg. Director of Operations
S. Dzuba	Regional Engineer
R.S. Fedoruk	Regional Inspector
H.T. Lathwell	Reg. Supt. Radio Operations
K. Moy	Regional Comp. Syst. Admin.
D.R. Thomas	Authorization Supv.

April 24-25 MONTREAL

A. Bélanger	Programmeur-Analyste Régional
J. Bourassa	Coordonnateur à L'Autorité
C. Brunet	Dist. Mgr. Trois-Rivières
R. Cyr	Coordonnateur à L'Application
T. Foucault	Chef Exploitation
M. Lepage	Bureau Régional
G. Migneault	Responsable du Génie



May 1-2 MONCTON

A. Boudreau	Regional Comp. Syst. Admin.
W.D. Cunningham	Chief Engin. Services
J.F. Johnston	Dist. Mgr. Saint John
J.L. Palmer	Reg. Supt. Licencing and Authorization
D.S. Snowdon	Reg. Projects Engineer
J.R. Valiquette	Reg. Chief Operations

June 11-13 SMS/ALS GROUP MEETING TO FINALIZE DATA CONTENT WITH REPRESENTATIVES FROM ALL REGIONS

D.T. Black	Director of Operations	)	Pacific
K. Moy	Regional Comp. Syst. Admin.	)	
I.E. Williams	Supt. Auth. & Oper. Standards	)	Central
S. Komlos	Supt. Spectrum Engineering	)	Ontario
G. Rolston	Regional Engineer	)	
J. Bourassa	Regional Coordinator Authorization	)	Québec
R. Cyr	Regional Coordinator Enforcement	)	
A. Boudreau	Regional Comp. Syst. Admin.	)	
F. Cunningham	Chief Engineering	)	
J. Palmer	Supt. Licencing & Author.	)	Atlantic
D. Snowdon	Microwave Project Engineer	)	
R. Valiquette	Chief Operations	)	

OTHER INTERVIEWEES:

J. Braden - Economic Policy & Statistics Branch - D.O.C.

R. Parish - DND

A. Hewitt	)
W. Longman	)
D. Nasser	)
R. Smith	) MOT
R. Downey	)
A. Blais	)
F. Fong	)

1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION
2. FREQUENCY CONDITION AND USE
3. TRANSMITTING STATION AND SITE
4. TRANSMITTING EQUIPMENT
5. TRANSMITTING ANTENNA
6. RECEIVING STATION AND SITE
7. RECEIVING EQUIPMENT
8. RECEIVING ANTENNA
9. FREQUENCY COORDINATION AND SUPPLEMENTARY INFORMATION
10. SHIPS AND AIRCRAFT ONLY

LIST OF APPENDICES

EXPLANATORY NOTE

1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

- 1.1 Name of Licensee
- 1.2 Company Code
- 1.3 Address of Licensee
- 1.4 Holder
- 1.5 Individual or Other
- 1.6 Nationality Status
- 1.7 Language
- 1.8 Region
- 1.9 Province or Territory Code
- 1.10 Service Category
- 1.11 Fee
- 1.12 Amendment Charge
- 1.13 License Number (Including Prefix)
- 1.14 Appendix to Licence
- 1.15 Application Date
- 1.16 Date Assigned
- 1.17 Issue Date
- 1.18 Review Date of Provisional Frequency Assignment
- 1.19 Expiry Year
- 1.20 Date of Last Update of Assignment Record
- 1.21 Information Source Code
- 1.22 Date of Last Inspection
- 1.23 Inspection Discrepancy Code
- 1.24 Notice Number
- 1.25 IFRB Circular No. and Date
- 1.26 ITU Dates Date of Notification
- 1.27 ITU Code

(continued)

1.28 Standard Industrial Code

1.29 Type of User Code

1.30 Telephone Number of Control Point

1.31 SRSP Status

1.32 Number of Municipal Stations

1.33 Record ID, Serial Number etc.

1.34 Satellite Network

1.35 Life Expectancy

## 2. FREQUENCY CONDITION AND USE

- 2.1 Assigned Frequency
- 2.2 Reference Frequency
- 2.3 Receive (Reciprocal) Frequency
- 2.4 Assigned Frequency Band
- 2.5 Type of Frequency Usage
- 2.6 Class of Station and Nature of Service
- 2.7 Operational Equipment Function Code
- 2.8 Equipment Mobility Code
- 2.9 Number of Mobile Units
- 2.10 Schedule of Operation
- 2.11 HF Broadcasting Schedule
- 2.12 Circuit Hours in Use

### 3. TRANSMITTING STATION AND SITE

- 3.1 Coded Name of Station
- 3.2 Full Name of Station
- 3.3 Geographic Coordinates
- 3.4 Site Elevation (AMSL)
- 3.5 Type of Terrain Code
- 3.6 Conductivity
- 3.7 Call Sign
- 3.8 Geographic Coordinates of Linked Transmitting Site
- 3.9 Site Elevation (AMSL) of Linked Transmitting Site
- 3.10 Number of Satellites
- 3.11 Country
- 3.12 Geostationary Orbital Position
- 3.13 Geostationary Orbital Tolerance
- 3.14 Visible Arc of Geostationary Orbit
- 3.15 Visible Arc Variance Code
- 3.16 Angle of Inclination of the Orbit of a Non-Geostationary Satellite
- 3.17 Orbital Period
- 3.18 Altitude Apogee
- 3.19 Altitude Perigee
- 3.20 Linked Transmit Earth Station
- 3.21 Earth Station Co-Ordination Contour Code
- 3.22 Horizon Profile Code



#### 4. TRANSMITTING EQUIPMENT

- 4.1 Equipment Type Code
- 4.2 RF Power Output
- 4.3 RF Power Output (dBm)
- 4.4 Necessary Bandwidth and Type of Emission
- 4.5 Proposed CCIR Necessary Bandwidth and Type of Emission
- 4.6 E(I) RP
- 4.7 Supplementary "Emission Mode Code"
- 4.8 Emission Type (Linked Transmitter)
- 4.9 Transmit Peak Power (Space System)
- 4.10 Transmit Modulation Characteristics Code
- 4.11 Energy Dispersal Code

## 5. TRANSMITTING ANTENNA

- 5.1 Filter Type Code
- 5.2 Number of Series Cavities
- 5.3 Insertion Loss
- 5.4 Multicoupler Code
- 5.5 Total Losses
- 5.6 Transmission Line Loss
- 5.7 Total Structure Height (Tower) AGL
- 5.8 Antenna Marking Code
- 5.9 Radiator Height AGL
- 5.10 Type of Antenna
- 5.11 Antenna Pattern Code
- 5.12 Antenna Efficiency (%)
- 5.13 Antenna Gain
- 5.14 Polarization Code
- 5.15 Width of Main Lobe (6 db)
- 5.16 Width of Main Lobe (3 db)
- 5.17 Azimuth of the Main Beam
- 5.18 Antenna Farm Code
- 5.19 Vertical Antenna Separation
- 5.20 Antenna Elevation Angle
- 5.21 Number of Spot Beams
- 5.22 Pointing Accuracy of Antenna
- 5.23 Worst Case Axial Ratio
- 5.24 Minimum Angle of Elevation
- 5.25 Range of Operating Azimuthal Angles

(continued)

5.26 Radar Antenna Rotation

5.27 Scans per Minute

5.28 Scanning Motion Code and Type of Scan Code

## 6. RECEIVING STATION AND SITE

- 6.1 Circuit Length
- 6.2 Path Modification Factor
- 6.3 Location Code
- 6.4 Location Description Reference Code
- 6.5 Location Radius
- 6.6 Full Name of Station
- 6.7 Coded Name of Station
- 6.8 Geographic Coordinates
- 6.9 Site Elevation (AMSL)
- 6.10 Coded Name of Associated Receive Station
- 6.11 Geographical Coordinates of Associated Receiving Location
- 6.12 Site Elevation (AMSL) of Associated Receiving Location
- 6.13 Service Arc
- 6.14 Maximum Power Density
- 6.15 Service Area Code
- 6.16 Transmit Gain Contours Code
- 6.17 Receive Gain Contours Code

## 7. RECEIVING EQUIPMENT

- 7.1 Ambient Noise Code
- 7.2 Minimum Required Signal Level
- 7.3 RF Channel Bandwidth
- 7.4 Equipment Type Code (Associated Receiver)
- 7.5 Equipment Protection Standard Code (Associated Receiver)
- 7.6 Supplementary "Emission Mode Code"
- 7.7 Multicoupler Code (Associated Receiver)
- 7.8 Filter Type Code (Associated Receiver)
- 7.9 Number of Series Cavities
- 7.10 Insertion Loss
- 7.11 Receive Noise Temperature
- 7.12 Equivalent Satellite Link Noise Temperature

## 8. RECEIVING ANTENNA

- 8.1 Azimuth of Antenna Main Lobe of the Associated Receiver
- 8.2 Antenna Beamwidth (Associated Receiver)
- 8.3 Polarization Code (Associated Receiver)
- 8.4 Antenna Pattern Code (Associated Receiver)
- 8.5 Antenna Gain (Associated Receiver)
- 8.6 Receptor Height AGL
- 8.7 Antenna Elevation Angle (Associated Receiver)
- 8.8 Minimum Angle of Elevation for Receiving Earth Station



## 9. FREQUENCY COORDINATION AND SUPPLEMENTARY INFORMATION

- 9.1 Agreements Code
- 9.2 IFRB Findings
- 9.3 Coordination Code
- 9.4 Coordination Letter (Serial Number & Date)
- 9.5 Other Frequencies on the Same Circuit
- 9.6 Other Frequencies Used Simultaneously
- 9.7 I.T.U. Supplementary Information

10. SHIPS AND AIRCRAFT ONLY

- 10.1 Licenced Vessel Number
- 10.2 Vessel Gross Tonnage
- 10.3 Vessel Type Code
- 10.4 Minimum Equipment Standard
- 10.5 Equipment Carried: Main Station Medium Frequency
- 10.6 Power (in Kilowatts)
- 10.7 Aircraft Class
- 10.8 Aircraft Markings
- 10.9 Service Volume
  
- 10.10 Additional Equipment
- 10.11 MOT Inventory Code

## LIST OF APPENDIXES

- Appendix A - Service Category
  - Licence Fee - New
  - Licence Fee - Amendment
- B-- Administrating Office Identifier
- C - Licence Appendix
- D - Inspection Descrepancy Code
- E - Class of Station and Nature of Service
- F - Equipment Function Code
- G - Geographical Place Name Coding
- H - Country Symbols
- I - Classification and Designation of Emissions (New)
- J - Classification and Designation of Emissions (Old)
- K - Type of Power Relative to Class of Emission
- L - Symbols for Type of Antenna -HF Broadcasting
- M - Radio Regulation 490
- N - Circular Letter 304
- O - US/CAN Coordination Codes
- P - Spectrum Management System (Abstract)

## SMS DATA BASE ITEMS

## 1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

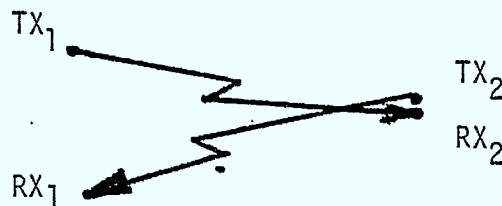
ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.1	Name of Licensee	Alpha Numeric	70	Full name of the licensee should be given rather than initials. William John Carter rather than W.J. Carter. This area has been expanded to accomodate longer names, e.g. Government departments, amateur clubs, etc.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

## EXPLANATORY NOTE

In any two-way communication system, there are two transmitter-receiver pairs. These pairs are usually separated by some distance over which communication is desired. Although each transmitter-receiver pair is usually co-located, it is possible that they be separate. The receiver in a transmitter-receiver pair is referred to as the associated receiver. The transmitter and receiver in the transmitter-receiver pair with which the desired communications is established is referred to as the linked transmitter and linked receiver.

For example,



When referring to TX<sub>1</sub>, RX<sub>1</sub> is the associated receiver and RX<sub>2</sub> is the linked receiver; TX<sub>2</sub> is the linked transmitter.

In any one-way communication system, therefore, there does not exist an associated receiver. However, every communication system must have at least one linked receiver.

## SMS DATA BASE ITEMS

## 1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.2	Company code	Numeric	9	A digital code, derived from the license file number, which designates the licensee and the file series.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>

## REMARKS :

- Segregate all licensees into corporate and personal categories. Licensees which are corporate entities are assigned a 7-Digit company code (as at present) with an additional 2-digit suffix for intra-organization identification e.g. to provide for separate geographic addresses dispersed within regions or districts within one organization.
- Personal (individual) licensees will require 9-digit field and these licensees will be required to supply their social insurance number. We propose that the S.I.N. number will become the equivalent of the company code for personal licensees.
- This will alter the present concept i.e. identification of category of service from the company code would not be possible directly; however it will eliminate multiple company codes (with different spelled names) for the same entity.
- Legal french and english names for the same company will be accomodated utilizing one company code and a cross-reference table.
- Government entities would have a basic seven digit company code with an additional two digit suffix for intra-organization identification.



## SMS DATA BASE ITEMS

## 1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.3	Address of Licensee	Alpha Numeric	70	<u>Street Address</u> . The mailing address of the licensee <u>City/Town, etc.</u> City or town and province of the mailing address of the licensee. <u>Postal Code</u> - To be entered when and if available. <u>Note</u> : 26 digits only are available for "city Town, etc."
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>

REMARKS :

SMS DATA BASE ITEMS

1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.4	Holder	Numeric	1	The use of this field will <u>automatically</u> place the words (on behalf of) on the licence and it is therefore unnecessary to enter these words manually. The use of the above procedures will permit the sorting of the data file in <u>alphabetical order</u> from information in the "Name of Licensee" column. When such a listing is required, the "Holder" column information is disregarded since such an item as "J. D. Cook on behalf of", is secondary to the name of the club.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>

REMARKS :

SMS DATA BASE ITEMS

1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.5	Individual or Other	Numeric	1	To indicate whether the licensee is an individual or other.
DATA INPUT RESPONSIBILITY =				
AUTHORIZATION OFFICE				<input checked="" type="checkbox"/>
HEADQUARTERS				<input type="checkbox"/>
COMPUTER GENERATED				<input type="checkbox"/>

REMARKS :

## SMS DATA BASE ITEMS

## 1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.6	Nationality Status	Numeric	3	The letters A will be used to indicate that the licensee is a non-immigrant, i.e. alien. Landed immigrant information is entered by the use of the letter I followed by the <u>last two figures of the year beyond which the licence may not be renewed on the basis of landed immigrant status, i.e. six years after the date on which the licensee becomes a landed immigrant. A licence issued to a person who became a landed immigrant in 1970 will have the indicator I76.</u> C - Indicates Canadian status
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>

REMARKS :

SMS DATA BASE ITEMS

1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION						
1.7	Language	Numeric	1	To indicate whether licence is to be produced using English or French. Required for such items as appendices, address etc.						
DATA INPUT RESPONSIBILITY = <table border="1" style="display: inline-table; vertical-align: top;"> <tr> <td>AUTHORIZATION OFFICE</td> <td><input checked="" type="checkbox"/></td> </tr> <tr> <td>HEADQUARTERS</td> <td><input type="checkbox"/></td> </tr> <tr> <td>COMPUTER GENERATED</td> <td><input type="checkbox"/></td> </tr> </table>				AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>	HEADQUARTERS	<input type="checkbox"/>	COMPUTER GENERATED	<input type="checkbox"/>	
AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>									
HEADQUARTERS	<input type="checkbox"/>									
COMPUTER GENERATED	<input type="checkbox"/>									

REMARKS :

SMS DATA BASE ITEMS

1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.8	Region	Numeric	1	Numeric code to identify regional subdivision of DOC.  1 - Pacific 2 - Central 4 - Ontario 5 - Quebec 6 - Atlantic
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>

REMARKS :

# SMS DATA BASE ITEMS

## 1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.9	Province or Territory Code	Alpha	1	Alphabetic code of province or territory <u>CODE</u> C All Canada B British Columbia A Alberta S Saskatchewan M Manitoba O Ontario Q Quebec K New Brunswick V Nova Scotia P Prince Edward Island F Newfoundland T Northwest Territories Y Yukon
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>	
		HEADQUARTERS	<input type="checkbox"/>	
		COMPUTER GENERATED	<input type="checkbox"/>	

REMARKS :

# SMS DATA BASE ITEMS

## 1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.10	Service Category	Alpha	4	<ul style="list-style-type: none"> <li>The actual identification of service category should agree with fee structure as it appears in the Radio Regulations (Domestic) at time of file design.</li> <li>More than one service category must be accommodated.</li> </ul>
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

### REMARKS :

Reference Appendix A



SMS DATA BASE ITEMS

1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.11	Fee	Numeric	6	Actual fee for the type of licence. If no fee applicable it should be so stated by "NIL".
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

Reference Appendix A

# SMS DATA BASE ITEMS

## 1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.12	Amendment Charge	Numeric	4	<p>To indicate an amendment fee associated with the licence being processed</p> <p>The four spaces include two spaces to accomodate cents.</p>
DATA INPUT RESPONSIBILITY =			<div>AUTHORIZATION OFFICE</div> <div>HEADQUARTERS</div> <div>COMPUTER GENERATED</div>	<div>X</div> <div></div> <div></div>

### REMARKS :

Reference Appendix A

SMS DATA BASE ITEMS

1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.13	License Number (Including Prefix)	Numeric	11	<p>A three digit prefix is used to identify the DOC Region and district office of administration. A six digit number is utilized to identify each licence.</p> <p>A two digit suffix is used to identify the district enforcement office.</p>
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>

REMARKS :

Prefix - Region (1) + District Office (2).  
 Suffix Enforcement District Office.

Reference Appendix B

# SMS DATA BASE ITEMS

## 1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.14	Appendix to Licence	Alpha	3	A series of appendices, each with a code letter, e.g. A'B'C, etc., is available in the data base for use with any licence as required. These are more or less permanent appendices, i.e. not subject to frequency change. If any of these (up to 3) are applicable to an individual licence, it is only necessary to enter the equivalent code letter or lettered.
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE	X	
		HEADQUARTERS		
		COMPUTER GENERATED		

### REMARKS :

Reference Appendix C

SMS DATA BASE ITEMS

1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.15	Application Date	Numeric	6	Date DDMMYY application received by Department
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>	
		HEADQUARTERS	<input type="checkbox"/>	
		COMPUTER GENERATED	<input type="checkbox"/>	

REMARKS :

## SMS DATA BASE ITEMS

## 1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.16	Date Assigned	DDMMYY	6	The date, by day, month and year, the frequency was authorized either by the issuance of a letter of authority or by licence.
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>	
		HEADQUARTERS	<input type="checkbox"/>	
		COMPUTER GENERATED	<input type="checkbox"/>	

REMARKS :

SMS DATA BASE ITEMS

1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.17	Issue Date	Numeric	6	Date DDMMYY licence was granted. May be date of letter of authority preceding issuance of licence.
DATA INPUT RESPONSIBILITY =			<input checked="" type="checkbox"/>	AUTHORIZATION OFFICE
			<input type="checkbox"/>	HEADQUARTERS
			<input type="checkbox"/>	COMPUTER GENERATED

REMARKS :

SMS DATA BASE ITEMS

1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.18	Review Date of Provisional Frequency Assignment	Numeric	4	This is the date (month and year) of expiry of the provisional assignment.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	X
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :



SMS DATA BASE ITEMS

1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.19	Expiry Year	Numeric	2	The year of expiry of the licence production operation.
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE		<input type="checkbox"/>
		HEADQUARTERS		<input type="checkbox"/>
		COMPUTER GENERATED		<input type="checkbox"/>
				<input checked="" type="checkbox"/>

REMARKS :

# SMS DATA BASE ITEMS

## 1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.20	Date of Last Update of Assignment Record	DDMMYY	6	To indicate date of last update to master assignment record.
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE		
		HEADQUARTERS		
		COMPUTER GENERATED		X

REMARKS :

SMS DATA BASE ITEMS

1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.21	Information Source Code	Numeric	1	<p>To indicate source of information (data) contained in record. Coding would cover source such as:</p> <p> Cards  Application Form  Microfilm  Cards and microfilm  Cards and file  File and microfilm  Cards, file and microfilm  Inspection  Other </p>
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE	<input checked="checked" type="checkbox"/>	
		HEADQUARTERS	<input type="checkbox"/>	
		COMPUTER GENERATED	<input type="checkbox"/>	

REMARKS :

SMS DATA BASE ITEMS

1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.22	Date of Last Inspection	MMYY	4	This would indicate month and year of last inspection for this assignment.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

## SMS DATA BASE ITEMS

## 1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.23	Inspection Discrepancy Code		6	To indicate 3 most major deficiencies found during last inspection.
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE		
		HEADQUARTERS		
		COMPUTER GENERATED		

## REMARKS :

Held in abeyance  
Reference Appendix D

SMS DATA BASE ITEMS

1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.24 a	Notice Number	Numeric	5	A serial number assigned at the time of notification to the IFRB.
DATA INPUT RESPONSIBILITY =				<div>AUTHORIZATION OFFICE</div> <div>HEADQUARTERS</div> <div>COMPUTER GENERATED</div>

REMARKS :

For all services except HF Broadcasting. The notice number for HF broadcasting is unique and covered separately.

May be machine generated.

SMS DATA BASE ITEMS

1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.24 b	Notice Number	Alpha-Numeric	11	<p>The first notice of each scheduled frequency for March 1975 would be shown 1/3/75 and any subsequent change would be shown 1(a)/3/75 1(b)/3/75 etc.</p> <p>Notices are renumbered for each schedule</p> <p>HF Broadcasting</p>
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE		
		HEADQUARTERS	X	
		COMPUTER GENERATED		

REMARKS :

## SMS DATA BASE ITEMS

## 1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.25	IFRB Circular No. and Date	Numeric	10	a four part weekly circular published by the ITU for the purpose of keeping administrations informed of the status of changes to frequency assignments in the MIFR. (Includes new, amend and delete.)
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE		
		HEADQUARTERS		X
		COMPUTER GENERATED		

## REMARKS :

Each circular bears a distinctive serial number (4 digits) and is dated (6 digits)



## SMS DATA BASE ITEMS

## 1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.26	<u>ITU Dates</u>			
	Date of Notification	DDMMYY	6	Date assignment was notified to IFRB
	( 2a DDMMYY		6	MIFR Registration Data
	( 2b	"	6	MIFR Notification Date
	( 2c	"	6	Date in use (actual or foreseen) is the date of putting the frequency assignment in use.
	( 2d	"	6	Date of Receipt of Notification by IFRB when 2a or 2b are not used.
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE		
		HEADQUARTERS	X	
		COMPUTER GENERATED		

## REMARKS :

2c date in use is an authorizing office input responsibility

## SMS DATA BASE ITEMS

## 1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.27	ITU Code	Numeric	1	A code letter indicating ITU Frequency Assignment Notification status.
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE		
		HEADQUARTERS		X
		COMPUTER GENERATED		

REMARKS :

# SMS DATA BASE ITEMS

## 1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.28	Standard Industrial Code	Numeric	5	A five figure group developed from the Standard Industrial Code published by "Statistics Canada".
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>	
		HEADQUARTERS	<input type="checkbox"/>	
		COMPUTER GENERATED	<input type="checkbox"/>	

### REMARKS :

Policy Branch have proposed a refinement of the SIC code to provide a more detailed breakdown.

## SMS DATA BASE ITEMS

## 1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.29	Type of User Code	Numeric	2	A code to indicate the type of user Private Common Carrier Restricted Common Carrier Operational (Ship or Aircraft) Commercial (Ship or Aircraft) etc.
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE		
		HEADQUARTERS		
		COMPUTER GENERATED		

REMARKS :

# SMS DATA BASE ITEMS

## 1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.30	Telephone Number of Control Point	Numeric	7	This is the telephone number of the contact point for matters concerning the operation of this station.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>

### REMARKS :

Area code can be determined by other means.

# SMS DATA BASE ITEMS

## 1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.31	SRSP Status	Numeric	1	<p>A digital code indicating the status of microwave systems in respect to the applicable Standard Radio System Plan (SRSP)</p> <p>These code categories are:</p> <p>1- Primary- meets criteria of applicable Standard Radio System Plan</p> <p>2- Secondary- does not meet requirements of existing Standard Radio System Plan</p>
DATA INPUT RESPONSIBILITY =			<div>AUTHORIZATION OFFICE</div> <div>HEADQUARTERS</div> <div>COMPUTER GENERATED</div>	<div>X</div> <div></div> <div></div>
REMARKS :				

SMS DATA BASE ITEMS

1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.32	Number of Municipal Stations	Numeric	4	The purpose of this block is to record the number of stations covered by a single licence in the Municipal Service.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

Applicable to land and mobile stations only.

# SMS DATA BASE ITEMS

## 1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.33	Record ID Serial Number Check Digit Suffix Edit Status Maintenance Status Book Number Reciprocal Serial Number			Data Base record control fields to be defined during file design.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :



SMS DATA BASE ITEMS

1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.34	Satellite Network	Alpha Numeric	9	name of satellite network in which the station or space station is operating.
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>	
		HEADQUARTERS	<input type="checkbox"/>	
		COMPUTER GENERATED	<input type="checkbox"/>	

REMARKS :

SMS DATA BASE ITEMS

1. ADMINISTRATIVE, MANAGEMENT AND STATUS INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
1.35	Life Expectancy	Numeric Years	2	The life expectancy of the satellite is indicated in number of years.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

## SMS DATA BASE ITEMS

## 2. FREQUENCY CONDITION AND USE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
2.1	Assigned Frequency	Alpha Numeric	10	The centre of the frequency band assigned to a station (in Hz) for transmitting.
	unit	Alpha	1	K, M, G or T for KHz, MHz, GHz or THz respectively.
	Frequency	Numeric	9	Assumed decimal between position five and six
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>

## REMARKS :

Multiplier on input to minimize errors is to be considered at time file designed:

This field may be qualified by the "Type of Frequency Usage" field;

S - assigned frequency

R - lower limit of frequency range

## SMS DATA BASE ITEMS

## 2. FREQUENCY CONDITION AND USE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
2.2	Reference Frequency	Alpha Numeric	10	See ITU RR 87 Reference Frequency: A frequency having a fixed and specified position with respect to the assigned frequency. The displacement of this frequency with respect to the assigned frequency has the same absolute value and sign that the displacement of the characteristic frequency has with respect to the centre of the frequency band occupied by the emission.
	unit	Alpha	1	K, M, G or T for KHz, MHz, GHz and THz respectively.
	frequency	Numeric	9	assumed decimal between position five and six.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>

## REMARKS :

At present time normally used to indicate the carrier frequency in an SSB signal whether full, reduced or suppressed.

Field length requirement to be determined at time of file design.

This field may be qualified by the "Type of Frequency Usage" field codes;

S - reference frequency if applicable

R - the upper limit for the assigned frequency range

SMS DATA BASE ITEMS

2. FREQUENCY CONDITION AND USE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
2.3	Receive (Reciprocal) Frequency	Alpha Numeric	10	The centre of the frequency band assigned to a receive only station. Reciprical frequency (ies) is (are) the frequency (ies) being received at the receiving site associated with a transmitter in order to complete two way communications.
	unit	Alpha	1	
	unit	Numeric	9	
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

## SMS DATA BASE ITEMS

## 2. FREQUENCY CONDITION AND USE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
2.4	Assigned Frequency Band	KHz		See RR89 ITU Assigned Frequency Band: The frequency band the centre of which coincides with the frequency assigned to the station and the width of which equals the necessary bandwidth plus twice the absolute value of the frequency tolerance. Primarily required for ITU space notifications.
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE		
		HEADQUARTERS	X	
		COMPUTER GENERATED		

## REMARKS :

The assigned frequency band will be computed internally utilizing necessary bandwidth and frequency tolerance as identified in Appendix 3 ITU Radio Regulations.

## SMS DATA BASE ITEMS

## 2. FREQUENCY CONDITION AND USE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
2.5	Type of Frequency Usage	Alpha	1	<p>A code to qualify the frequency usage</p> <p>S = single frequency</p> <p>P = duplex frequency</p> <p>R = Frequency range</p> <p>O = Frequency with offset carrier (TV Broadcast)</p> <p>D = Frequency with precision offset carrier (TV Broadcast)</p>
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>	
		HEADQUARTERS	<input type="checkbox"/>	
		COMPUTER GENERATED	<input type="checkbox"/>	
<p>REMARKS :</p> <p>This field qualifies the assigned Tx frequency field.</p> <p>Note: Field identified subsequent to June 11-13 Regional Meeting.</p>				

SMS DATA BASE ITEMS

2. FREQUENCY CONDITION AND USE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
2.6	Class of Station and Nature of Service	Alpha	6	<p>An alpha code indicating the class of station and nature of service as per Appendix 10 ITU</p> <p>First 4 spaces for up to two classes of station 5 and 6 for nature of service.</p>
DATA INPUT RESPONSIBILITY =			<div>AUTHORIZATION OFFICE</div> <div>HEADQUARTERS</div> <div>COMPUTER GENERATED</div>	<div>X</div> <div></div> <div></div>

REMARKS :

Reference Appendix E



## SMS DATA BASE ITEMS

## 2. FREQUENCY CONDITION AND USE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION																																
2.7	Operational Equipment Function Code	Numeric	3	<p>A code to indicate the function performed by the equipment</p> <p>The code will have to identify all functions for the frequencies assigned by ICAO Coordination Section of the Ministry of Transport (MOT) in the following frequency bands:</p> <table><tr><td>74.6</td><td>MHz-</td><td>75.4</td><td>MHz</td></tr><tr><td>108.0</td><td>MHz-</td><td>121.975</td><td>MHz</td></tr><tr><td>122.200</td><td>MHz-</td><td></td><td></td></tr><tr><td>123.300</td><td>MHz-</td><td></td><td></td></tr><tr><td>123.575</td><td>MHz-</td><td>128.825</td><td>MHz</td></tr><tr><td>132.025</td><td>MHz-</td><td>135.0</td><td>MHz</td></tr><tr><td>328.6</td><td>MHz-</td><td>335.4</td><td></td></tr><tr><td>960</td><td>MHz-</td><td>1215.</td><td>MHz</td></tr></table>	74.6	MHz-	75.4	MHz	108.0	MHz-	121.975	MHz	122.200	MHz-			123.300	MHz-			123.575	MHz-	128.825	MHz	132.025	MHz-	135.0	MHz	328.6	MHz-	335.4		960	MHz-	1215.	MHz
74.6	MHz-	75.4	MHz																																	
108.0	MHz-	121.975	MHz																																	
122.200	MHz-																																			
123.300	MHz-																																			
123.575	MHz-	128.825	MHz																																	
132.025	MHz-	135.0	MHz																																	
328.6	MHz-	335.4																																		
960	MHz-	1215.	MHz																																	
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE																																		
		HEADQUARTERS																																		
		COMPUTER GENERATED																																		

## REMARKS :

Reference Appendix F

MOT to review

Note: Field identified subsequent to June 11-13 Regional Meeting

SMS DATA BASE ITEMS

2. FREQUENCY CONDITION AND USE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
2.8	Equipment Mobility code	Alpha	1	A code to indicate equipment Mobility F = Permanent fixed installation T = Fixed while in operation (transportable) M = Mobile operation possible (mobile) P = Portable (walky talky etc)  A code to indicate the equipment platform A = Airborne G = Ground L = On Rivers, lakes etc R = On Railways M = Maritime J = Amphibious S = Space P = Projectile
	Equipment Platform code	Alpha	1	
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>	
		HEADQUARTERS	<input type="checkbox"/>	
		COMPUTER GENERATED	<input type="checkbox"/>	
REMARKS :				
Note: Field identified subsequent to June 11-13 Regional Meeting				

## SMS DATA BASE ITEMS

## 2. FREQUENCY CONDITION AND USE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
2.9	Number of Mobile Units	Numeric	4	The number of mobile units operating on the assigned frequency into a designated base station or in a specified area.  Applicable to land mobile service only.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>

## REMARKS :

Call sign of designated base station most frequently worked or coordinates and service radius in the case of mobile to mobile.  
Computer inserts mobile unit against the appropriate Base station and amends the " no. of mobile units " field.

# SMS DATA BASE ITEMS

## 2. FREQUENCY CONDITION AND USE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
2.10	Schedule of Operation	Alpha Numeric	6	C -continious operation during indicated time period I -intermittend operation during indicated time period S -intermittend operation during indicated schedule time J -operation during day time only X -operation under identical condition during day and night time V -operation under varying condition N--operation during night time only scheduled hours of operation with opening time (in G M T) rounded down and closing time (in G M T) rounded up.  A = Perennial  B = April - September  C = October - March  E = Spring  F = Summer  G = Autumn  H = Winter  I = Spring and Autumn
	duty cycle	Alpha	1	
	Hours from, to	Numeric	4	
	Seasonal period	Alpha	1	
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	
REMARKS :				

## SMS DATA BASE ITEMS

## 2. FREQUENCY CONDITION AND USE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
2.11	HF Broadcasting Schedule	Alpha	9	Actual hours of operation of the station to the nearest 15 minutes i.e. 1615-1745 These schedules shall cover each of the following seasonal propagation periods and shall be implemented at 0100 G.M.T. on the first Sunday of the period concerned:  M - March Schedule                      - March and April J - May Schedule                         - May, June, July & August S - September Schedule                 - September and October D - November Schedule                 - November, December, January and February  HF Broadcasting
	Hours of Operation	Numeric	8	
	Seasonal period	Alpha	1	
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE HEADQUARTERS COMPUTER GENERATED		<div>X</div>
REMARKS :				

SMS DATA BASE ITEMS

2. FREQUENCY CONDITION AND USE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
2.12	Circuit Hours in Use	Alpha Numeric	4	<p>Maximum hours in G.M.T., that the <u>circuit</u> is in operation to each locality or area. Used for ITU requirements for fixed HF circuits utilizing more than one frequency due to propagation characteristics.</p> <p>Reference ITU RR Appendix 1 Col. 10</p>
DATA INPUT RESPONSIBILITY =			<div>AUTHORIZATION OFFICE</div> <div>HEADQUARTERS</div> <div>COMPUTER GENERATED</div>	<div>X</div> <div></div> <div></div>
REMARKS :				

## SMS DATA BASE ITEMS

## 3. TRANSMITTING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
3.1	Coded Name of Station	Alpha-Numeric	11	The abbreviated name of the transmit station (8 spaces) plus 3 additional characters to identify a specific location in a municipality.  First eight spaces are coded from the place name as it appears in the "Gazeteer of Canada" or the "Quebec Gazeteer".
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>

## REMARKS :

Reference Appendix G

SMS DATA BASE ITEMS

3. TRANSMITTING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION			
3.2	Full Name of Station  (Station location/area of operation)	Alpha Numeric	35	<p>A/C - Manufacturer and Type of aircraft.                      Land - Geographical place name of location of the station.</p> <p>*Ship - Name of Vessel</p> <p>Mobile - Operating area by geographical place name.</p> <p>**Ship - area of water on which vessels operate followed by ship's name.</p> <p>Land - Full name of transmit station or area of operation as it appears in</p> <ol style="list-style-type: none"> <li>1. Gazetteer of Canada</li> <li>2. Quebec Gazetteer</li> </ol>			
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE HEADQUARTERS COMPUTER GENERATED		<table border="1"> <tr> <td>X</td> </tr> <tr> <td> </td> </tr> <tr> <td> </td> </tr> </table>	X		
X							

REMARKS :

- \* If licenced under Canada Shipping Act.
- \*\* If licenced under Radio Act.

Non geographical place names are accomodated on a case by case basis.



SMS DATA BASE ITEMS

3. TRANSMITTING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
3.3	Geographic Coordinates			
	Latitude	Numeric	7	
	Longitude	Numeric	8	The latitude and longitude at the antenna site, in degrees (°), minutes ('), seconds (") and tenths of seconds.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>
REMARKS :				

SMS DATA BASE ITEMS

3. TRANSMITTING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
3.4	Site Elevation (AMSL)	Numeric feet	5	The height of the site, on which the antenna structure is erected, above mean sea level, in feet (ft.)
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>	
		HEADQUARTERS	<input type="checkbox"/>	
		COMPUTER GENERATED	<input type="checkbox"/>	

REMARKS :

SMS DATA BASE ITEMS

3. TRANSMITTING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
3.5	Type of Terrain Code	Numeric	1	<p>Type of terrain such as the following could be indicated.</p> <p>Area with high buildings or high vegetation in immediate vicinity of radio station (&gt; 20 meters);</p> <p>Area with buildings or vegetation of medium height in immediate vicinity of radio station (&gt; 5 - ≤20 meters);</p> <p>Area with buildings or vegetation of lower height in immediate vicinity of radio station (&lt; 5 meters);</p> <p>Area containing no obstacles within 300 to 400 meters of the station in the main direction of transmission;</p>
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE HEADQUARTERS COMPUTER GENERATED		<p>Area containing no obstacles within 1000 meters of the station in the main direction of transmission.</p>

REMARKS :

SMS DATA BASE ITEMS

3. TRANSMITTING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
3.6	Conductivity			Ground conductivity defined as poor, good and excellent
DATA INPUT RESPONSIBILITY =				
AUTHORIZATION OFFICE				
HEADQUARTERS				
COMPUTER GENERATED				X

REMARKS :

This information is required for systems such as LF Beacons and Broadcasting.  
 It is proposed that this conductivity be mapped in a subfile and accessed as required.

## SMS DATA BASE ITEMS

## 3. TRANSMITTING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
3.7	Call Sign	Alpha-Numeric	10	A combination of alpha-numeric characters used to identify a station.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>

## REMARKS :

6 basic character spaces required for C/S except GRS and Broadcasting  
GRS would require up to 9  
Broadcasting would require up to 9.

Canadian Allocation Series: CFA-CKZ  
CYA-CZZ  
VOA-VOZ  
VXA-VYZ  
XJA-XOZ  
VAA-VGZ

SMS DATA BASE ITEMS

3. TRANSMITTING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
3.8	Geographic Coordinates of Linked Transmitting Site			
	Latitude	Numeric	7	The latitude and longitude at the antenna site, in degrees (°), minutes ('), seconds (") and tenths of seconds.
	Longitude	Numeric	8	
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>

REMARKS :

Coordinate accuracy to 1/10 second to be used only where desirable

# SMS DATA BASE ITEMS

## 3. TRANSMITTING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
3.9	Site Elevation (AMSL) of Linked Transmitting Site	Numeric feet	5	The height of the site, on which the antenna structure is erected, above mean sea level, in feet (ft.)
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

# SMS DATA BASE ITEMS

## 3. TRANSMITTING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
3.10	Number of satellites	Numeric	2	The number of satellites utilized in a non-geostationary system or the number of satellites in a geostationary satellite network.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :



.SMS DATA BASE ITEMS

3. TRANSMITTING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
3.11	Country	Alpha	3	Name of administration notifying the assignment to IFRB.  required for space system
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

Reference Appendix H

SMS DATA BASE ITEMS

3. TRANSMITTING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
3.12	Geostationary Orbital Position	Numeric Degrees Longitude	3	Nominal geographical longitude of the satellite on the geostationary satellite orbit.  Longitudes shall be expressed in degrees west of the Greenwich 0 <sup>0</sup> Meridian.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE HEADQUARTERS COMPUTER GENERATED	<input checked="" type="checkbox"/>   

REMARKS :

SMS DATA BASE ITEMS

3. TRANSMITTING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
3.13	Geostationary Orbital Tolerance	Numeric Degrees	4	The longitudinal and inclination tolerance of the nominal geostationary position of the satellite with provision to a hundredth of a degree accuracy.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

## SMS DATA BASE ITEMS

## 3. TRANSMITTING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
3.14	Visible Arc of geostationary orbit.	Numeric Degree	6	In the case of a space station aboard a geostationary satellite the visible arc is the arc of the geostationary satellite orbit over which the space station is visible, at a minimum angle of elevation of $10^0$ at the Earth's surface, from its associated earth stations or service areas. The geostationary satellite orbit within which the space station could provide the required service areas.
		Numeric	6	
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE HEADQUARTERS COMPUTER GENERATED		<input checked="checked" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
REMARKS :				

## SMS DATA BASE ITEMS

## 3. TRANSMITTING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
3.15	Visible Arc Variance Code	Numeric	2	Code to indicate the reasons why the visible arc defined at 10 <sup>0</sup> elevation from the earth station differs from the arc utilized to provide the required service.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE HEADQUARTERS COMPUTER GENERATED	<input checked="checked" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
REMARKS :				

SMS DATA BASE ITEMS

3. TRANSMITTING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
3.16	Angle of Inclination of the Orbit of a Non-geo stationary Satellite	Numeric Degrees	3	The angle determined by the plane containing an orbit and the plane of the Earth's equator, for non geostationary satellites.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

SMS DATA BASE ITEMS

3. TRANSMITTING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
3.17	Orbital Period	Alpha Numeric	4	The period (of a satellite) is the time elapsing between two consecutive passages of a satellite through a characteristic point on its orbit. 1 <sup>st</sup> position to represent M-Month, D-Day, and H-Hours. Period is represented to one decimal place.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	X
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

SMS DATA BASE ITEMS

3. TRANSMITTING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
3.18	Altitude Apogee	Numeric (km)	6	The altitude of the apogee is the point of greatest distance of the orbit above a specified reference surface serving to represent the surface of the Earth in km.
DATA INPUT RESPONSIBILITY.. =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :



SMS DATA BASE ITEMS

3. TRANSMITTING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
3.19	Altitude Perigee	Numeric (km)	6	The altitude of the perigee is the point of orbit minimum distance above a specific reference surface serving to represent the surface of the Earth in km.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

SMS DATA BASE ITEMS

3. TRANSMITTING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
3.20	Linked Transmit Earth Station	Alpha	8	Name of transmitting earth station being received by the satellite.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="checked" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>
REMARKS :				

## SMS DATA BASE ITEMS

## 3. TRANSMITTING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
3.21	Earth station Co-Ordination Contour Code	Numeric	3	A code to identify the sub file in which the co-ordination contour of the earth station is contained. The co-ordination contour indicates the distances on all azimuths around an earth station within which a terrestrial station sharing the same frequency band may cause or be subject to more than a permissible level of interference.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>

REMARKS :

SMS DATA BASE ITEMS

3. TRANSMITTING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
3.22	Horizon Profile Code	Numeric	3	Graphical indication of horizon elevation angle for each azimuth.  This will be carried in a subfile for each 50 of azimuth
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>

REMARKS :

SMS DATA BASE ITEMS

4. TRANSMITTING EQUIPMENT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
4.1	Equipment Type Code	Alpha-Numeric	10	For type approved equipment, code will be the type approval number i.e. code will start with numbers 1,2, ...9 For non-type approved equipment, code will identify the manufacturer and model number i.e. code would start with number "0".
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>	
		HEADQUARTERS	<input type="checkbox"/>	
		COMPUTER GENERATED	<input type="checkbox"/>	

REMARKS :

## SMS DATA BASE ITEMS

## 4. TRANSMITTING EQUIPMENT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION/ SPECIFICATION-REPRESENTATION
4.2	RF Power Output	Alpha Numeric	6	<p>The Rf power supplied by the transmitter to the antenna transmission line. The first two position to indicate the type of power and the unit of power. The four remaining digit to indicate the power to the nearest decimal point.</p> <p>The "type of power" code is as follows</p> <p>C = <u>Carrier power (Pc)</u> this is the average power supplied during one radio-frequency cycle under conditions of no modulation (No. 97 RR)</p> <p>D = <u>Effective radiated carrier power (Pce)</u></p> <p>M = <u>Mean power (Pm)</u> this is the power averaged over a time sufficiently</p>
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

## REMARKS:

Reference Appendix K

## The unit code:

U = Microwatt;

L = Milliwatt;

W = Watt;

K = Kilowatt;

M = Megawatt.

long compared with the period of the lowest frequency encountered in the modulation. A time of 1/10 second during which the mean power is greatest is normally selected (No. 96 RR).

N = Effective radiated mean power (Pme)

P = Peak envelope power (Pp)  
this is the average power supplied to the antenna transmission line by a transmitter during one radio-frequency cycle at the highest crest of the modulation envelope, taken under conditions of normal operation (No. 95 RR).

Q = Effective radiated peak envelope power (Ppe)

## SMS DATA BASE ITEMS

## 4. TRANSMITTING EQUIPMENT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
4.3	RF Power Output (dBm)	Numeric dBm	3	The RF power, expressed in dBm, supplied by the transmitter to the transmission line. Internal conversion by computer from TxRF Power Output (watts, KW, MW)
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE		
		HEADQUARTERS		
		COMPUTER GENERATED		X

REMARKS :

## SMS DATA BASE ITEMS

## 4. TRANSMITTING EQUIPMENT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
4.4	Necessary Bandwidth and Type of Emission	Alpha-Numeric	10	Necessary bandwidth - 7 digits expressed in KHz to the nearest 10 Hz (1/100 KHz) Ref. RR91 - ITU  Type of Emission - 3 digits Ref. Article 2-ITU
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>

## REMARKS :

For multiple entries of necessary bandwidth and type of emission accommodation must be made in final system design.

Reference Appendix J



SMS DATA BASE ITEMS

4. TRANSMITTING EQUIPMENT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
4.5	Proposed CCIR Necessary Bandwidth and Type of Emission	Alpha Numeric	8*	A dual representation of necessary bandwidth and type of emission to accommodate a revised method of representing necessary bandwidth and type of emission as proposed by CCIR. (refer CCIR document # 1/1039 of XIIIth Plenary Assembly and/or IFRB circular letter 323).
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

\* To permit a greater accuracy of bandwidth than that provided for in the CCIR recommendation.  
i.e. 2.04A2 etc. (2041 rather than 202)

Reference Appendix I

## SMS DATA BASE ITEMS

## 4. TRANSMITTING EQUIPMENT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION/ SPECIFICATION-REPRESENTATION
4.6	E (I) RP	Numeric dBm	3	The effective radiated power in the direction of the reception point of the antenna, referred to a half-wave dipole in the case of ERP (for frequencies from 27.6 MHz to 890 MHz), or referred to an isotropic antenna in the case of E (I) RP (for frequencies below 27.5 MHz and above 890 MHz), expressed in decibels dBm.
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE		
		HEADQUARTERS		
		COMPUTER GENERATED		

REMARKS:

## SMS DATA BASE ITEMS

## 4. TRANSMITTING EQUIPMENT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
4.7	Supplementary "Emission Mode Code"	Numeric	1	A single digit code to identify:  1. Tone squelch 2. Digital 3. Paging  etc.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>

REMARKS :

## SMS DATA BASE ITEMS

## 4. TRANSMITTING EQUIPMENT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
4.8	Emission Type (Linked Transmitter)	Alpha Numeric	3	Emission types in accordance with Article 2. ITU RR.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	X
			HEADQUARTERS	
			COMPUTER GENERATED	

## REMARKS :

Reference Appendix J

## SMS DATA BASE ITEMS

## 4. TRANSMITTING EQUIPMENT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
4.9	Tx Peak Power (Space System)	Numeric	3	Peak power delivered to the antenna input for each carrier
	Tx Total Peak Power (Space System)	Numeric	3	Total peak power delivered to the antenna input
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>

REMARKS :

## SMS DATA BASE ITEMS

## 4. TRANSMITTING EQUIPMENT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
4.10	Transmit Modulation Characteristics Code	Alpha-Numeric	3	A code to call a sub file where the various modulation characteristics of transmitted carriers as outlined in Appendix 1A are contained.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

## REMARKS :

For each carrier, according to the nature of the signal modulating the carrier and the type of modulation, the following characteristics are indicated:

- carrier frequency modulated by a frequency-division multi-channel telephony baseband (FDM-FM) or by a signal that can be represented by a multichannel telephony baseband: indicate the lowest and highest frequencies of the baseband and the r.m.s. frequency deviation of the test tone as a function of baseband frequency;
- carrier frequency modulated by a television signal: the standard of the television signal (including where appropriate, the standard used for colour), the frequency deviation for the reference frequency of the pre-emphasis characteristic and the pre-emphasis characteristic itself are indicated. Also where applicable, the characteristics of the multiplexing of the video signal with the sound signal(s) or other signals are indicated;
- carrier phase-shift-modulated by a pulse code modulation signal (PCM/PSK): the bit rate and the number of phases are indicated;
- amplitude modulated carrier (including single sideband): as precisely as possible the nature of the modulating signal and the kind of amplitude modulation used are indicated.

## SMS DATA BASE ITEMS

## 4. TRANSMITTING EQUIPMENT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
4.11	Energy Dispersal Code	Alpha Numeric	1	A code to identify if energy dispersal is utilized on the carrier and the type of energy dispersal.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

SMS DATA BASE ITEMS

5. TRANSMITTING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
5.1	Filter Type Code	Alpha Numeric	2	Code to identify the type of filter which is located at output of transmitter, including special combinations.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :



SMS DATA BASE ITEMS

5. TRANSMITTING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
5.2	Number of Series Cavities	Numeric	1	Number to represent the number of series cavities of the filter.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

SMS DATA BASE ITEMS

5. TRANSMITTING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
5.3	Insertion Loss	DB Numeric	2	Loss associated with number of cavities in series
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

## SMS DATA BASE ITEMS

## 5. TRANSMITTING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
5.4	Multicoupler Code	Alpha Numeric	12	Code to represent a combination of up to six individual multicoupler (Duplexers, Diplexers, Hybrids etc) located between transmitter output and antenna input, each referenced by a two digit code.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>

REMARKS :

SMS DATA BASE ITEMS

5. TRANSMITTING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
5.5	Total Losses	Numeric		
	(Tx Path)	dB	3	Total losses from the transmitter output to the antenna input including line losses.
	(Rx Path)	dB	3	Total losses from the antenna output to the receiver input including line losses.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

To the nearest 1/10 db.

## SMS DATA BASE ITEMS

## 5. TRANSMITTING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
5.6	Transmission Line Loss (Tx only)	Numeric dB	3	The total loss in dB due to the characteristics of the transmission line.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

## REMARKS :

To the nearest 1/10 db.

## SMS DATA BASE ITEMS

## 5. TRANSMITTING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
5.7	Total Structure Height (Tower) AGL	Feet Numeric	4	Total structure height (tower) AGL is the height of the antenna bearing structure or the uppermost part of the antenna (whichever is the higher) AGL.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

SMS DATA BASE ITEMS

5. TRANSMITTING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
5.8	Antenna Marking Code	Numeric	1	<p>A code to identify requirement by licensee for lighting and/or painting of antenna structure</p> <p>0- None  1- Painted  2- Lighted  3- Lighted and Painted  4- Special</p>
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>	
		HEADQUARTERS	<input type="checkbox"/>	
		COMPUTER GENERATED	<input type="checkbox"/>	

REMARKS :

SMS DATA BASE ITEMS

5. TRANSMITTING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
5.9	Radiator Height AGL	Alpha Numeric	5	<p>The height of the radiator above ground level (units in feet until metric conversion date by department)</p> <p>A code</p> <p>C- the height indicated is the electrical centre of the radiator above ground</p> <p>T- the height indicated is the top of the radiator above ground.</p>
	height AGL	Numeric	4	
	measurement qualifier	Alpha	1	
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE		
		HEADQUARTERS		
		COMPUTER GENERATED		

REMARKS :



## SMS DATA BASE ITEMS

## 6. RECEIVING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
5.10	Type of Antenna	Alpha-Numeric	15	The nomenclature of the C.C.I.R. Book of "Antenna Diagrams" should be used wherever it is applicable as shown in the list in Part III Appendix 2 of the ITU Radio Regulations  - HF Broadcasting only
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE		
		HEADQUARTERS	X	
		COMPUTER GENERATED		

## REMARKS :

Reference Appendix L

## SMS DATA BASE ITEMS

## 5. TRANSMITTING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
5.11	Antenna Pattern Code	Numeric	5	A code representing various types of antenna patterns.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	
			COMPUTER GENERATED	

## REMARKS :

Antenna pattern code will accomodate and include present T.C.T.S. code for microwave. It will accomodate typical antenna patterns for some portions of the spectrum in coded format as required.

## SMS DATA BASE ITEMS

## 5. TRANSMITTING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
5.12	Antenna Efficiency (%)	Numeric	3	Applicable to NDB  Range 0.5 to 30%
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE		<input checked="" type="checkbox"/>
		HEADQUARTERS		<input type="checkbox"/>
		COMPUTER GENERATED		<input type="checkbox"/>
				<input type="checkbox"/>

REMARKS :

## SMS DATA BASE ITEMS

## 5. TRANSMITTING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION/ SPECIFICATION-REPRESENTATION
5.13	Antenna Gain (Tx)	Numeric	3	For antennas used for frequencies below 27.5 MHz the gain is expressed relative to an isotropic radiator; for frequencies between 27.5 MHz and 890 MHz the gain is expressed relative to a half-wave dipole; where as for frequencies above 890 MHz the gain is expressed again relative to an isotropic antenna. An accuracy of only one decimal is permitted.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>

REMARKS:

SMS DATA BASE ITEMS

5. TRANSMITTING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
5.14	Polarization Code	Numeric	1	The direction of the primary electric field vector as a result of the radiation from the antenna, expressed in coded form.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	X
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

- To identify vertical, horizontal, right hand or left hand circular polarization.

## SMS DATA BASE ITEMS

## 5. TRANSMITTING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
5.15	Width of Main Lobe (6 db)	Numeric Angular Degrees	4	This is the total angle, measured in degrees (0), within which the power radiated in any direction does not fall more than 6 dB below the power radiated in the direction of maximum radiation.
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>	
		HEADQUARTERS	<input type="checkbox"/>	
		COMPUTER GENERATED	<input type="checkbox"/>	

## REMARKS :

ITU - Requires the 6 dB point except for stations in space systems and those stations notified under R.R. 490.

There is a separate field for 3 db points

- machine generated when antenna pattern is internal to the computer.

Reference Appendix M

## SMS DATA BASE ITEMS

## 5. TRANSMITTING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
5.16	Width of Main Lobe (3 dB )	Numeric Angular Degrees	4	This is the total angle, measured in degrees ( $^{\circ}$ ), within which the power radiated in any direction does not fall more than 3 dB below the power radiated in the direction of maximum radiation.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	
			COMPUTER GENERATED	

## REMARKS :

There is a separate field for 6dB points  
- machine generated when antenna pattern is internal to the computer.

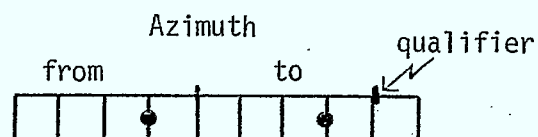
## SMS DATA BASE ITEMS

## 5. TRANSMITTING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
5.17	Azimuth of the Main Beam	Numeric	8	The angle, in the horizontal plane, measured clockwise in degrees ( <sup>0</sup> ), with reference to true North, of the direction of maximum radiation and/or 0 <sup>0</sup> reference point on the antenna pattern.
	qualifier	Numeric	1	Last position to indicate bi-directional, omni-directional antennas etc.  The fixed azimuthal direction of maximum radiation in the first four position or the outer limits of a sector scanned in the eight position is indicated.
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE		
		HEADQUARTERS		
		COMPUTER GENERATED		

## REMARKS :

Allows for one decimal position  
 Azimuth of True North is indicated as 0.0<sup>0</sup>  
 Print program for IFRB requires ND to indicate non directional antenna pattern in notifications.





## SMS DATA BASE ITEMS

## 5. TRANSMITTING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
5.18	Antenna Farm Code	Numeric	1	Numeric code to indicate that the transmit location and/or the associated Rx location are part of an antenna farm; an antenna farm is defined as a collection of transmit and/or receiving antennas in close proximity of each other.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE HEADQUARTERS COMPUTER GENERATED	<input checked="checked" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
REMARKS :				

SMS DATA BASE ITEMS

5. TRANSMITTING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
5.19	Vertical Antenna Separation	Feet Numeric	3	Vertical separation between Tx and associated Rx antennas situated on same antenna structure.
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>	
		HEADQUARTERS	<input type="checkbox"/>	
		COMPUTER GENERATED	<input type="checkbox"/>	

REMARKS :

This vertical height separation in feet will require the assessing of additional tables to provide the dB isolation, between associated Rx and Tx.

Optional entry

## SMS DATA BASE ITEMS

## 5. TRANSMITTING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
5.20	Antenna Elevation Angle or Elevation Scanning Sector	Numeric Angular Degrees	7	<p>The angle in the vertical plane between the horizontal direction towards a reception point and the direction of maximum radiation of the antenna in the vertical plane, measured in degrees (<sup>0</sup>) is indicated in the first four position (including sign)</p> <p>For a scanning sector, the lower and upper limits of the sector scanned are indicated.</p>
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE HEADQUARTERS COMPUTER GENERATED		<div><div>from</div><div>to</div><div><div>±</div><div></div><div>•</div><div></div><div>•</div><div></div></div></div>

## REMARKS :

Field width of 4 to provide for sign ( $\pm$ ), one decimal place, and 2 digits before the decimal. (+ for above horizon, - for below horizon)  
Machine generated for microwave systems

NOTE: For scanning sector accuracy to one decimal position not required and representation to be reviewed at time of file design. Possibly reduce field length to six position.

SMS DATA BASE ITEMS

5. TRANSMITTING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
5.21	Number of Spot Beams	Numeric	2	Number of spot beam antennae on a Space Station
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE HEADQUARTERS COMPUTER GENERATED	<div><div>X</div><div></div><div></div></div>

REMARKS :

SMS DATA BASE ITEMS

5. TRANSMITTING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
5.22	Pointing Accuracy of Antenna	Numeric Degrees	2	Pointing accuracy of the space station Antenna aboard a geostationary satellite. Permits accuracy of up to 9.9 with the $\pm$ being understood.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

## SMS DATA BASE ITEMS

## 5. TRANSMITTING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
5.23	Worst Case Axial Ratio	dB	2	The polarization worst case axial ratio within the half power beam of radiation.
DATA INPUT RESPONSIBILITY =				AUTHORIZATION OFFICE HEADQUARTERS COMPUTER GENERATED

REMARKS :

## SMS DATA BASE ITEMS

## 5. TRANSMITTING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
5.24	Minimum Angle of Elevation	Numeric Degrees	3	Minimum angle of elevation is the planned minimum operating angle of elevation of the antenna in the direction of maximum radiation, in degrees from the horizontal plane.
DATA INPUT RESPONSIBILITY =				AUTHORIZATION OFFICE HEADQUARTERS COMPUTER GENERATED

## REMARKS :

Can be derived from earth station location and longitudes of geostationary satellites, but would have to be inputted for Earth Stations communicating with non-geostationary satellite.

## SMS DATA BASE ITEMS

## 5. TRANSMITTING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
5.25	Range of Operating Azimuthal Angles	Numeric Degrees	6	In degrees, clockwise from True North, the planned range of operating azimuthal angles for the direction of maximum radiation.
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>	
		HEADQUARTERS	<input type="checkbox"/>	
		COMPUTER GENERATED	<input type="checkbox"/>	

## REMARKS :

The earth stations, can be derived from its location and the location of geostationary satellites



SMS DATA BASE ITEMS

5. TRANSMITTING ANTENNA

5. TRANSMITTING ANTENNA							
ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION			
5.26	Radar Antenna Rotation	RPM	3				
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE HEADQUARTERS COMPUTER GENERATED	<table><tr><td>X</td></tr><tr><td></td></tr><tr><td></td></tr></table>	X		
X							

REMARKS :

SMS DATA BASE ITEMS

5. TRANSMITTING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
5.27	Scans per Minute	Numeric	4	Number of complete scan per minute
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE		
		HEADQUARTERS		
		COMPUTER GENERATED		

REMARKS :

# SMS - DATA BASE ITEMS

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
5.28	Scanning Motion Code	Alpha	1	A code to indicate the antenna beam scanning motion method  C = Conical scan H = Horizontal sector scan R = Horizontal 360° scan V = Vertical sector scan N = Horizontal vertical sector scans T = Automatic follow up scan P = Palmer scan  A code to identify the scan  F = Fan-shaped; P = Pencil-beam shaped;  S = Spiral-shaped;
	Type of Scan Code	Alpha	1	
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

SMS DATA BASE ITEMS

6. RECEIVING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
6.1	Circuit Lenght	Alpha-Numeric	5	The shortest distance in statute miles nautical miles or kilometres as indicated, between the transmission and reception points.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

SMS DATA BASE ITEMS

6. RECEIVING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
6.2	Path Modification Factor	dB Numeric	3	A factor which represents propagation loss, due to local environment, and relative to free space loss.
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE HEADQUARTERS COMPUTER GENERATED	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	

REMARKS :

Optional Input

SMS DATA BASE ITEMS

6. RECEIVING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
6.3	Location Code	Numeric	1	<p>This code will indicate if the receiver which is receiving the transmission from the transmitter specified above is</p> <p>(1) a single fixed receiver  (2) a circular service area  (3) a network of fixed stations or  (4) an irregular area's boundary as defined by a series of sets of geographic co-ordinates.</p> <p>In conjunction with this field an auxiliary file will be developed to accomodate aeronautical service volume and information on networks of stations.</p>
DATA INPUT RESPONSIBILITY =			<div>AUTHORIZATION OFFICE</div> <div>HEADQUARTERS</div> <div>COMPUTER GENERATED</div>	<div>X</div> <div></div> <div></div>

REMARKS :

SMS DATA BASE ITEMS

6. RECEIVING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
6.4	Location Description Reference Code	Numeric	1	This code is used in conjunction with receiver location codes 3 and 4 to reference, in an auxiliary file, the sets of co-ordinates which describe the receiver location. <u>Service area file now accommodate MOT operating position information.</u>
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>	
		HEADQUARTERS	<input type="checkbox"/>	
		COMPUTER GENERATED	<input type="checkbox"/>	

REMARKS :

SMS DATA BASE ITEMS

6. RECEIVING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
6.5	Location Radius	Miles Numeric	3	Radius in miles of a circular service area otherwise left blank.
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>	
		HEADQUARTERS	<input type="checkbox"/>	
		COMPUTER GENERATED	<input type="checkbox"/>	

REMARKS :



SMS DATA BASE ITEMS

6. RECEIVING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
6.6	Full Name of Station	Alpha Numeric	35	Full name of receive station location as it appears in the Gazetteer of Canada except - in Quebec the standard reference is the Quebec Gazetteer. - non geographical place names are accomodated on a case by case basis.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

Codes and decodes for geographical place names are the same whether for transmitting or receiving.

## SMS DATA BASE ITEMS

## 6. RECEIVING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
6.7	Coded Name of Station	Alpha-Numeric	11	The abbreviated name of the receiver station (8 spaces) plus 3 additional characters to identify a specific location in a municipality. First 8 spaces are coded from the place name as it appears in the "Gazeteer of Canada" or the "Quebec Gazeteer"
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>

## REMARKS :

See also name of TX station as the same code applies.

Reference Appendix G

SMS DATA BASE ITEMS

6. RECEIVING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
6.8	Geographic Coordinates			
	Latitude	Numeric	7	The latitude and longitude at the antenna site, in degrees (°), minutes ('), seconds (") and tenths of seconds.
	Longitude	Numeric	8	
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>

REMARKS :

## SMS DATA BASE ITEMS

## 6. RECEIVING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
6.9	Site Elevation (AMSL)	Alpha Numeric	8	code name of associated Rx site.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

## REMARKS :

Reference Appendix L

## SMS DATA BASE ITEMS

## 6. RECEIVING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
6.10	Coded Name of Associated Receiver Station	Alpha-Numeric	11	The abbreviated name of the receiver station (8 spaces) plus 3 additional characters to identify a specific location in a municipality. First 8 spaces are coded from the place name as it appears in the "Gazeteer of Canada" or the "Québec Gazetteer".
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	
			COMPUTER GENERATED	

## REMARKS :

Reference Appendix G

SMS DATA BASE ITEMS

6. RECEIVING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
6.11	Geographical Coordinates of Associated Receiving Location			Geographic latitude and longitude of the receiver associated with the transmitter expressed in degrees ( <sup>0</sup> ), minutes ('), seconds (") and tenths of seconds
	Latitude	Numeric	7	
	Longitude	Numeric	8	
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>

REMARKS :

May or may not be identical to Tx coordinates

SMS DATA BASE ITEMS

6. RECEIVING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
6.12	Site Elevation (AMSL) of Associated Receiving Location	Feet Numeric	5	The height of the site, on which the antenna structure is erected, above mean sea level, in feet (ft.)
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>

REMARKS :

## SMS DATA BASE ITEMS

## 6. RECEIVING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
6.13	Service Arc	Numeric Degrees	6	Service arc is the arc of the geostationary satellite orbit within which the space station could provide the required service to its associated earth stations or service areas.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	X
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :



## SMS DATA BASE ITEMS

## 6. RECEIVING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
6.14	Maximum Power Density	Numeric db/m <sup>2</sup>	3	The maximum power density per Hz supplied to the input of the antenna averaged over the worst 4 kHz band for carriers below 15 GHz, or averaged over the worst 1 MHz band for carriers above 15 GHz.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>

REMARKS :

## SMS DATA BASE ITEMS

## 6. RECEIVING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
6.15	Service Area Code	Numeric	2	Code to indicate the service area or areas on the earth or the name of locality and country in which the receiving station(s) is (are) located.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>

REMARKS :

## SMS DATA BASE ITEMS

## 6. RECEIVING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
6.16	Transmit Gain Contours Code	Numeric	3	<p>In the case of a space station aboard a geostationary satellite, the gain contour code indicates the gain of the space station transmitting antenna by means of gain contours plotted on a map of the Earth's surface. The isotropic gain at each contour which corresponds to a gain of 2, 4, 6, 10 and 20 dB and at 10 dB intervals thereafter as necessary below the maximum gain, shall be indicated for each transmitting beam.</p> <p>In the case of a space station aboard a non-geostationary satellite, the code indicates the isotropic gain of the space station transmitting antenna in the main direction of radiation and indicates the antenna radiation pattern in those</p>
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>	
		HEADQUARTERS	<input type="checkbox"/>	
		COMPUTER GENERATED	<input type="checkbox"/>	

REMARKS :

directions which can intersect with the Earth's surface, taking the gain in the main direction of radiation as a reference;

The contours will be carried in sub file.

## SMS DATA BASE ITEMS

## 6. RECEIVING STATION AND SITE

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
6.17	Receive Gain Contours Code	Numeric	3	<p>In the case of a space station aboard a geostationary satellite, the gain contour code indicates the gain of the space station receiving antenna by means of gain contours plotted on a map of the Earth's surface. The isotropic gain at each contour which corresponds to a gain of 2, 4, 6, 10 and 20 dB and at 10 dB intervals thereafter as necessary, below the maximum gain, shall be indicated for each receiving beam.</p> <p>In the case of a space station aboard a non-geostationary satellite, indicate the isotrophic gain of the space station receiving antenna in the main direction of radiation and indicate the antenna radiation pattern in those directions which can intersect with the Earth's surface, taking the gain in the main direction of radiation as a reference.</p>
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>	
		HEADQUARTERS	<input type="checkbox"/>	
		COMPUTER GENERATED	<input type="checkbox"/>	

REMARKS :

SMS DATA BASE ITEMS

7. RECEIVING EQUIPMENT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
7.1	Ambient Noise Code	Numeric	1	Code to represent the noise factor of the environment at the Associated Rx site.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

## SMS DATA BASE ITEMS

## 7. RECEIVING EQUIPMENT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
7.2	Minimum Required Signal level	dBm Numeric	3	Minimum required signal level at the reception point (linked receiver) or edge of service area, which must be protected for communication purposes given a reliability.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE HEADQUARTERS COMPUTER GENERATED	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

REMARKS :

## SMS DATA BASE ITEMS

## 7. RECEIVING EQUIPMENT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
7.3	RF Channel Bandwidth	KHz Numeric	6	receiver front end bandwidth
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>	
		HEADQUARTERS	<input type="checkbox"/>	
		COMPUTER GENERATED	<input type="checkbox"/>	

## REMARKS :

6 position are required to specify up to 250,000 KHz (12.GHz microwave HCMS systems)

## SMS DATA BASE ITEMS

## 7. RECEIVING EQUIPMENT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
7.4	Equipment Type Code (Associated Receiver)	Alpha Numeric	9	For type approved equipment, code will be the type approval number i.e. code will start with numbers 1, 2, ...9 For non-type approved equipment, code will identify the manufacturer and model number i.e. code would start with number "0".
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE		<input checked="" type="checkbox"/>
		HEADQUARTERS		<input type="checkbox"/>
		COMPUTER GENERATED		<input type="checkbox"/>

REMARKS :



SMS DATA BASE ITEMS

7. RECEIVING EQUIPMENT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
7.5	Equipment Protection Standard Code (Associated Receiver)	Numeric	3	A code to access a file which will contain the associated receiver spurious response
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

Optional Input

## SMS DATA BASE ITEMS

## 7. RECEIVING EQUIPMENT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
7.6	Supplementary "Emission Mode Code"	Numeric	1	A single digit code to identify: 1. Tone squelch 2. Digital 3. Paging  etc.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>

REMARKS :

## SMS DATA BASE ITEMS

## 7. RECEIVING EQUIPMENT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
7.7	Multicoupler Code (Associated Receiver)	Alpha Numeric	12	Code to represent a combination of up to six individual multicoupler (Duplexers, Diplexers, Hybrids etc) located between antenna and the receiver input, each referenced by a two digit code.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

## SMS DATA BASE ITEMS

## 7. RECEIVING EQUIPMENT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
7.8	Filter Type Code (Associated Receiver)	Alpha Numeric	2	Code to identify the type of filter which is located at the input of the receiver including special combinations.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

SMS DATA BASE ITEMS

7. RECEIVING EQUIPMENT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
7.9	Number of Series Cavities	Numeric	1	Number to represent the number of series cavities of the filter.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

## SMS DATA BASE ITEMS

## 7. RECEIVING EQUIPMENT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
7.10	Insertion Loss	DB Numeric	2	Loss associated with number of cavities in series
DATA INPUT RESPONSIBILITY =				AUTHORIZATION OFFICE HEADQUARTERS COMPUTER GENERATED

REMARKS :

## SMS DATA BASE ITEMS

## 7. RECEIVING EQUIPMENT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
7.11	Rx Noise Temperature	Numeric Kelvin	4	The receiver noise temperature is the over all receiving system noise temperature; in the case of a space station, the lowest total receiving system noise temperature is indicated.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>

REMARKS :

## SMS DATA BASE ITEMS

## 7. RECEIVING EQUIPMENT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
7.12	Equivalent Satellite Link Noise Temperature	Numeric Kelvin	4	Noise temperature is the lowest equivalent satellite link noise temperature in Kelvins under "quiet sky conditions". This value shall be indicated for the nominal value of the angle of elevation when the associated transmitting station is aboard a geostationary satellite and, in other cases, for the minimum value of angle of elevation.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :



## SMS DATA BASE ITEMS

## 8. RECEIVING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
8.1	Azimuth of the Main Lobe of the Associated Receiver	Degrees Numeric	4	The angle, in the horizontal plane measured clockwise in degrees (0) with reference to true North of the direction of maximum gain of the receive antenna or the zero reference point on the pattern.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

## REMARKS :

To one decimal place.

## SMS DATA BASE ITEMS

## 8. RECEIVING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
8.2	Antenna Beamwidth (Associated Receiver)	Numeric Degrees	4	This is the total angle, measured in degrees ( $^{\circ}$ ), within which the power radiated in any direction does not fall more than 3 dB below the power radiated in the direction of maximum radiation.
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE HEADQUARTERS COMPUTER GENERATED	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	

REMARKS :

## SMS DATA BASE ITEMS

## 8. RECEIVING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
8.3	Polarization Code (Associated Receiver)	Numeric	1	Polarization of the receiving antenna system.
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE		<input checked="" type="checkbox"/>
		HEADQUARTERS		<input type="checkbox"/>
		COMPUTER GENERATED		<input type="checkbox"/>

REMARKS :

## SMS DATA BASE ITEMS

## 8. RECEIVING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
8.4	Antenna Pattern Code (Associated Receiver)	Numeric	5	A code representing various types of antennae patterns.
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>	
		HEADQUARTERS	<input type="checkbox"/>	
		COMPUTER GENERATED	<input type="checkbox"/>	

## REMARKS :

Antenna pattern code will accommodate and include present T.C.T.S. code for microwave. It will accomodate typical antenna patterns for some portions of the spectrum in coded format as required.

## SMS DATA BASE ITEMS

## 8. RECEIVING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
8.5	Antenna Gain (Associated Rx)	Numeric dB (i)	3	For antennas used for frequencies below 27.5 MHz the gain is expressed relative to an isotropic radiator; for frequencies between 27.5 MHz and 890 MHz the gain is expressed relative to a half wave dipole, whereas for frequencies above 890 MHz the gain is expressed again relative to an isotropic antenna. An accuracy of only one decimal is permitted.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

## SMS DATA BASE ITEMS

## 8. RECEIVING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
8.8	Minimum Angle of Elevation for Receiving Earth Station	Numeric Degrees	3	Minimum angle of elevation is the planned minimum operating angle of elevation of the antenna in the direction of maximum radiation, in degrees from the horizontal plane.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

## REMARKS :

Identical to the minimum angle of elevation of the earth station transmitting.

SMS DATA BASE ITEMS

8. RECEIVING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
8.7	Antenna Elevation Angle (Associated Receiver)	Numeric Angular Degrees	4	The angle in the vertical plane between the horizontal direction towards a transmitting point and the direction of maximum reception of the antenna in the vertical plane, measured in degrees (°).
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE HEADQUARTERS COMPUTER GENERATED	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

REMARKS :

Field width of 4 to provide for sign (+), one decimal place, and 2 digits before the decimal.

Possibility of being machine generated

SMS DATA BASE ITEMS

8. RECEIVING ANTENNA

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
8.6	Receptor Height AGL	Numeric Feet	4	The height of the centre of the receptor above ground level (units in feet until metric conversion date by department).
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE HEADQUARTERS COMPUTER GENERATED	<input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

REMARKS :



SMS DATA BASE ITEMS

9. FREQUENCY COORDINATION AND SUPPLEMENTARY INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
9.1	Agreements Code	Numeric		
	ITU		3	Code number referring to ITU Radio Regulation and Appendix Number
	OTHER		3	Code number reffering to other International Agreements.
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE		
		HEADQUARTERS	X	
		COMPUTER GENERATED		

REMARKS :

The actual agreements would be carried/identified in a subfile.

SMS DATA BASE ITEMS

9. FREQUENCY COORDINATION AND SUPPLEMENTARY INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
9.2	IFRB Findings 13a  13b 13c	Alpha  Alpha Alpha- Numeric	21	Results of examination by the IFRB and investigation of notified frequency assignments. Remarks relating to findings by the IFRB. Other remarks relative to a notified frequency assignment
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE HEADQUARTERS COMPUTER GENERATED	<input type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>	

REMARKS :

See IFRB Circular letter 304 - 18/4/74

13a - 4  
13b - 4  
13c - 13

Reference Appendix N

# SMS DATA BASE ITEMS

## 9. FREQUENCY COORDINATION AND SUPPLEMENTARY INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
9.3	Coordination Code	Numeric	2	Defines status(1 digit) and country or combination of countries (1digit) of coordination.  In case of coordination under the US/ Canada Coordination Agreements the agency concerned is identified (JCS, FCC, FAA, IRAC)
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	X
			HEADQUARTERS	X
			COMPUTER GENERATED	X

### REMARKS :

Regional coordination would be made prior to authorization as required and would not be recorded in the data base.

Status field would contain the following codes:

Input

- 1- Required - Authorization office
- 2- In process- Computer generated
- 3- Successful coordination- Headquarters
- 4- Not Successful- Headquarters
- 5- Coordinated with restriction(s)- Headquarters

Reference Appendix 0

SMS DATA BASE ITEMS

9. FREQUENCY COORDINATION AND SUPPLEMENTARY INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
9.4	Coordination Letter (Serial Number & Date)	Numeric	6	Sequential numbers recommencing each year assigned separately to letters of coordination going to USA agencies IRAC, FCC, JCS in accordance wiht USA/CAN Coordination Agreement i.e. 75-1400 would mean 1400th letter in 1975 to that particular agency.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	X
			COMPUTER GENERATED	

REMARKS :

SMS DATA BASE ITEMS

9. FREQUENCY COORDINATION AND SUPPLEMENTARY INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
9.5	Other Frequencies on the Same Circuit	Numeric	24	<p>Megacycle order of all other frequencies, between 4 and 28 MHz only, normally used on the same circuit.</p> <p>Reference ITU RR Appendix 1 Col. 11</p>
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>	
		HEADQUARTERS	<input type="checkbox"/>	
		COMPUTER GENERATED	<input type="checkbox"/>	

REMARKS :

A requirement for all notified HF frequency assignments in the fixed services above 4 MHz and below 28 MHz.  
 There are 2 digit spaces to represent the megahertz order of each of the frequencies on the same circuit.  
 If there are no other frequencies in the same circuit, the word "NIL" should appear in the notification.

SMS DATA BASE ITEMS

9. FREQUENCY COORDINATION AND SUPPLEMENTARY INFORMATION.

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
9.6	Other Frequencies Used Simultaneously	Numeric	15	<p>Other frequencies simultaneously used for the same programme to the same area(s)</p> <p>1. If the notified frequency is the only frequency used for the particular schedule, the indication "Nil" shall be inserted in this column.</p> <p>2. In other cases, the other frequencies simultaneously used for the same programme to the same area shall be indicated.</p> <p>HF Broadcasting only</p>
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input type="checkbox"/>
			HEADQUARTERS	<input checked="" type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>

REMARKS :

## SMS DATA BASE ITEMS

## 9. FREQUENCY COORDINATION AND SUPPLEMENTARY INFORMATION

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
9.7	I.T.U. Supplementary Information	Alpha Numeric	Variable	<p>Any supplementary information supplied by the administration should be indicated within the frame provided on the notice.</p> <p>If the assignment is made in application of a regional or service agreement, the relevant agreement shall be indicated in the appropriate place; otherwise, insert the indication "NIL".</p> <p>In any case where there are <u>one or more reference frequencies</u> in a particular transmission (e.g. in the case of (a) the frequency of the reduced carrier in an independent or single sideband emission and (b) the frequencies of the sound and vision carriers in a television emission), such reference frequencies shall be supplied. For stations in the</p>
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE		
		HEADQUARTERS		
		COMPUTER GENERATED		

Aeronautical Mobile (R) Service using permitted emissions other than DSB, the reference frequency together with the appropriate centre frequency of the channel listed in the Allotment Plan in Appendix 27 shall be supplied as supplementary information.

Any other information which the administration considers to be relevant should be indicated, such as, for example, an indication that the assignment concerned would be operating in accordance with No. 115 of these Regulations, or information concerning the use of the notified frequency if such use is restricted or if the frequency is not used during all the time which is possible according to propagation conditions.

Only the information specified in paragraph 3 above is a basic characteristic' it is recommended, however, that the information under paragraph 2 above be supplied. However, in the case of stations in the fixed or mobile service referred to in No. 492A, the name of any administration with which co-ordination of the use of the frequency has been sought and the name of any administration with which such co-ordination has been effected are basic characteristics.

REMARKS: Reference ITU RR Appendix 1

# SMS DATA BASE ITEMS

## 10. SHIPS AND AIRCRAFT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
10.1	Licenced Vessel Number Registered Vessel Number	Alpha Numeric Numeric	10	Registered - by Registrar of Shipping  Licenced - by Customs Officer primarily for small vessels.  <div> <div>N</div> <div>N</div> <div>A</div> <div>N</div> <div>N</div> <div>N</div> <div>N</div> <div>N</div> <div>N</div> <div>N</div> </div>
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE		
		HEADQUARTERS		
		COMPUTER GENERATED		

### REMARKS :

License Vessel Number

N

N

A

N

N

N

N

N

N

N

The third position of the number is an alpha character and the first three characters are the part identification.

Registered Vessel Number

The six characters are right justified in the same field. Canadian registration number presently fall between 100,000 and 199,999



SMS DATA BASE ITEMS

10. SHIPS AND AIRCRAFT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
10.2	Vessel Gross Tonnage	Numeric	5	The actual gross tonnage of the vessel is indicated.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>

REMARKS :

Applicable to Ship Stations only

SMS DATA BASE ITEMS

10. SHIPS AND AIRCRAFT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
10.3	Vessel Type Code	Numeric	1	Passenger 1
				Cargo 2
	Compulsary Equipped		1	Tug 3
	Voluntary Equipped		2	Fishing 4
				Pleasure 5
				Barges & Dredges (not self-propelled) 6
				Barges & Dredges (self-propelled) 7
				Miscellaneous 8
				Government 9
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	X
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

## SMS DATA BASE ITEMS

## 10. SHIPS AND AIRCRAFT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
10.4	Minimum Equipment Standard	Alpha	1	(C) for compulsorily fitted vessels (V) for voluntarily fitted vessels  OR  (L) for equipment meeting the requirements of Radio Standards Specification 134 (low power)  The designators (C) (V) & (L) indicate the minimum equipment standard the vessel is required to carry and should not be construed as being applicable to the equipment installed on board the vessel.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

Ship Station licence only

## SMS DATA BASE ITEMS

## 10. SHIPS AND AIRCRAFT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
10.5	Equipment Carried: Main Station Medium Frequency	Alpha	1	<p>Not type approved nor technically acceptable A</p> <p>Approved under Specification #110 B</p> <p>Approved under Specification #112 C</p> <p>Approved under Specification #134 D</p> <p>Technically Acceptable (CSA) E</p> <p>Approved under Specification #123 F</p> <p>Approved under Specification #181 G</p> <p>Not type approved nor technically acceptable 1</p> <p>Technically acceptable 40F3 Emission 2</p> <p>Technically acceptable 20F3 Emission 3</p> <p>Technically acceptable 36F3 Emission 4</p> <p>Approved under Specification #104 5</p> <p>Approved under Specification #182 6</p> <p>To indicate the use of single sideband equip-</p> <p>ment but only in cases where maritime mobile frequencies are em-</p> <p>ployed.</p>
DATA INPUT RESPONSIBILITY =		AUTHORIZATION OFFICE	X	
		HEADQUARTERS		
		COMPUTER GENERATED		
REMARKS : Applicable to Ship Station Licence only				

## SMS DATA BASE ITEMS

## 10. SHIPS AND AIRCRAFT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
10.6	Power (in Kilowatts) Medium frequency VHF	Numeric	8	<u>Power in Kilowatts</u> - The power in kilowatts of the medium frequency main station equipment and the very high frequency equipment is entered.  Accuracy to 3 decimals 1-4 MF, 5-8 VHF
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	
			COMPUTER GENERATED	

## REMARKS :

Applicable to Ship Station licence only

SMS DATA BASE ITEMS

10. SHIPS AND AIRCRAFT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
10.7	Aircraft Class	Alpha	1	C-Commercial G-Government P-Private
DATA INPUT RESPONSIBILITY =				<div>AUTHORIZATION OFFICE</div> <div>HEADQUARTERS</div> <div>COMPUTER GENERATED</div> <div>X</div> <div></div> <div></div>

REMARKS :

Aircraft licences only

SMS DATA BASE ITEMS

10. SHIPS AND AIRCRAFT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
10.8	Aircraft Markings	Alpha	5	To indicate the specific identification of each registered aircraft i.e. C-FITU
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	
			HEADQUARTERS	
			COMPUTER GENERATED	

REMARKS :

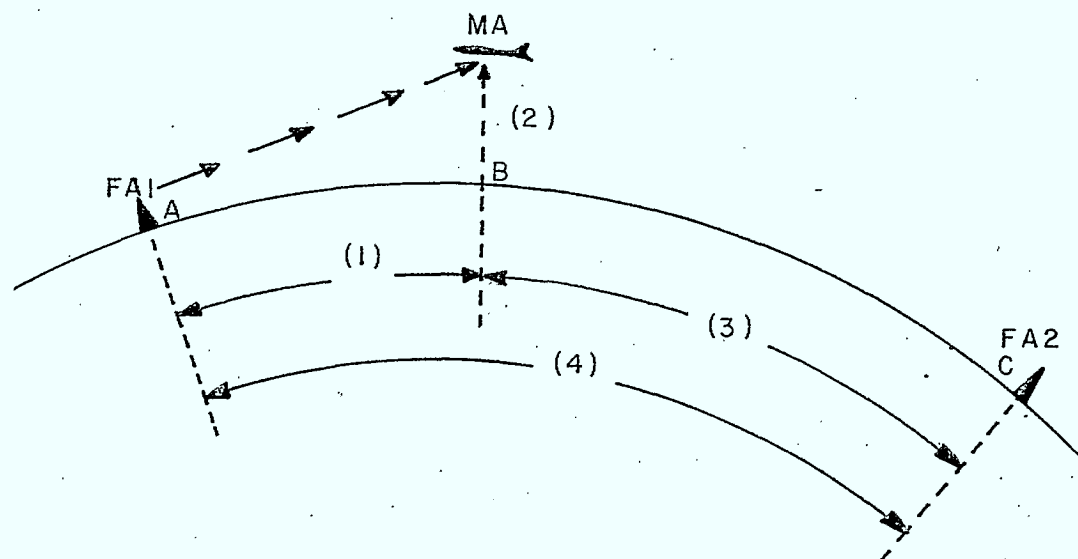
Applicable to Aircraft licences only.

# SMS DATA BASE ITEMS

## IO. SHIPS AND AIRCRAFT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
10.9	Service Volume	Alpha Numeric	18	In aeronautical mobile, the service volume is indicated.
	Unit	Numeric	1	N, nautical mile; M, statute mile; K, kilometer
	Service range	Numeric	3	The service range to be protected is indicated
	Service height (Lower Altitude)	Numeric	5	The service height to be protected is indicated (lower altitude)
	(Upper Altitude)	Numeric	5	(upper altitude height)
	Protection range	Numeric	4	The protection range for the service area or the operation area is indicated.
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE: HEADQUARTERS COMPUTER GENERATED	

### REMARKS :



### Service Volume

FA1 = Aeronautical station in communication with aircraft station MA

FA2 = Aeronautical station in communication with aircraft stations other than MA

MA = Aircraft station in communication with aeronautical station FA1

1 = Service range AB

2 = Service height B-MA

3 = Protection or interference range CB

4 = Repetition distance AC



## SMS DATA BASE ITEMS

## 10. SHIPS AND AIRCRAFT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
10.10	Additional Equipment:	Alpha	9	To indicate authorized installation of equipment in the aircraft.
	HF	Alpha	1	
	SSB		1	
	ADF		1	
	DME		1	
	Weather Radar		1	
	ATC Transponder		1	
	Doppler		1	
	Radio Altimeter		1	
	Miscellaneous		1	
DATA INPUT RESPONSIBILITY =			AUTHORIZATION OFFICE	<input checked="" type="checkbox"/>
			HEADQUARTERS	<input type="checkbox"/>
			COMPUTER GENERATED	<input type="checkbox"/>

## REMARKS :

\* Present data base provides for misc. but not currently in use.

SMS DATA BASE ITEMS

10. SHIPS AND AIRCRAFT

ITEM NO.	DATA ITEM	UNITS	FIELD LENGTH	DEFINITION / SPECIFICATION - REPRESENTATION
10.11	MOT Inventory Code	Numeric	5	
DATA INPUT RESPONSIBILITY =				
AUTHORIZATION OFFICE				<input checked="" type="checkbox"/>
HEADQUARTERS				<input type="checkbox"/>
COMPUTER GENERATED				<input type="checkbox"/>

REMARKS :

## FEE SCHEDULE

Subsections 4(2) and (3) of the General Radio Regulations, Part 1.

"(2) The fee payable for a station licence authorizing the performance of a General Radio Service is

(a) thirteen dollars and fifty cents for a licence that is valid for a period of three fiscal years;

(b) nine dollars for a licence that is valid for two fiscal years; or

(c) four dollars and fifty cents for a licence that is valid for one fiscal year or less.

(3) The fee payable for an amendment of any station licence for which a fee is prescribed, other than a station licence in respect of an Amateur Experimental Service or a General Radio Service, is eight dollars".

## " S C H E D U L E I

Tariff of Radio Station Fees

1. Licence for a coast station performing
  - (a) Limited Maritime Mobile Service.....\$98.00
  - (b) Private Maritime Mobile Service..... 26.00
2. Licence for a land station performing
  - (a) Public Commercial Service.....195.00
  - (b) Restricted Public Commercial Service.....130.00
  - (c) Private Commercial Service..... 26.00
  - (d) United States Military Service.....(no fee required)
  - (e) Provincial Government Service.....(no fee required)
  - (f) Municipal Service..... 13.00
  - (g) Experimental Service..... 26.00
  - (h) Amateur Experimental Service..... 13.00
  - (i) Public Commercial Receiving Service..... 20.00
  - (j) Private Commercial Receiving Service..... 13.00
  - (k) Public Commercial Automatic Repeater Service..... 98.00
  - (l) Private Commercial Automatic Repeater Service..... 13.00
  - (m) Aeronautical Mobile Service..... 26.00
3. Licence for a mobile station performing
  - (a) Public Commercial Service..... 46.00
  - (b) Private Commercial Service..... 10.00
  - (c) United States Military Service.....(no fee required)
  - (d) Provincial Government Service.....(no fee required)
  - (e) Municipal Service..... 13.00
  - (f) Experimental Service..... 13.00
  - (g) Public Commercial Receiving Service..... 20.00
  - (h) Private Commercial Receiving Service..... 13.00
  - (i) Aircraft Navigation Service..... 13.00
  - (j) Aeronautical Mobile Service..... 20.00
4. Licence for a ship station fitted with
  - (a) Transmitting and Receiving Apparatus..... 20.00
  - (b) Receiving Apparatus for Navigational Purposes..... 13.00"

ADMINISTRATIVE  
OFFICE IDENTIFIER

---

<u>ADDRESS</u>		<u>ADDRESS</u>
	<u>REGION 1</u>	
#300 Granville Street, VANCOUVER, B.C. V6C 1S5	11	325, rue Granville, Bureau 300 Vancouver (C.-B.) V6C 1S5
District Manager #300-325 Granville Street, VANCOUVER, B.C. V6C 1S5	12	Chef de district 325 rue Granville, Bureau 300 Vancouver (C.-B.) V6C 1S5
District Manager #116-816 Government Street VICTORIA B.C. V8W 1W9	13	Chef de district 816, rue Government, Bureau 116 Victoria (C.-B.) V8W 1W9
District Manager #227 Federal Building, PRINCE RUPERT, B.C. V8J 1G8	14	Chef de district Immeuble Fédéral, Bureau 227 Prince Rupert (C.-B.) V8J 1G8
District Manager #304-471 Queensway, KELOWNA, B.C. V1Y 6S5	15	Chef de district 471 Queensway, Bureau 304 Kelowna (C.-B.) V1Y 6S5
District Manager 1294-3rd Avenue PRINCE GEORGE, B.C. V2L 1H8	16	Chef de district 1294, 3 <sup>e</sup> avenue Prince-George C.-B.) V2L 3E7
District Manager 11-14 Ave. South, 2nd Floor RMC, CRANBROOK, B.C. V1C 2W9	17	Chef de district 11-14ieme ave sud 2ieme etage Cranbrook (c.-B) V1C 2W9
District Manager #201-4133 4th Avenue WHITEHORSE, Y.T. Y1A 1H8	25	Chef de district 4133 4 <sup>e</sup> avenue, Bureau 201 Whitehorse (T.Y.) Y1A 1H8

ADMINISTRATING  
OFFICE IDENTIFIER

APPENDIX B-2

<u>ADDRESS</u>	<u>REGION 2</u>	<u>ADDRESS</u>
2300-One Lombard Place WINNIPEG, Manitoba R3B 2Z8	32	1, Place Lombard, Bureau 2300 Winnipeg (Man.) R3B 2Z8
Room 300, Financial Building 10621-100 Avenue EDMONTON, Alberta T5J 0B4	22	Immeuble des Finances, Bureau 300 10621, 100 <sup>e</sup> avenue Edmonton (Alb.) T5J 0B4
803-205-8th Avenue S.E. CALGARY, Alberta T2G 0K9	23	Bureau 803 205, 8 <sup>e</sup> avenue sud-est Calgary (Alb.) T2G 0K9
101. Financial Building 2101 Scarth Street REGINA, Saskatchewan S4P 2H9	33	Immeuble des Finances, Bureau 101 2101, rue Scarth Régina (Sask.) S4P 2H9
206 Circle Drive East SASKATOON, Saskatchewan S7K 0T5	34	206, promenade Circle est, Saskatoon (Sask.) S7K 0T5
Federal Building GRANDE PRAIRIE, Alberta T8V 0X9	24	Immeuble Federal Grande-Prairie (Alb.) T8V 0X9
P.O. Box 2700 YELLOWKNIFE, N.W.T. XOE 1H0	26	Casier Postal 2700 Yellowknife, (T. Du. N.-O.) XOE 1H0
P.O. Box 540 FORT SMITH XOE 0P0	27	Casier Postal 540 Fort Smith (T.N.-O.) XOE 0P0
436 Thompson Drive THOMPSON, Manitoba R8N 0C6	38	436, Thompson Drive Thompson (Man.) R8N 0C6

ADMINISTRATING  
OFFICE IDENTIFIER

<u>ADDRESS</u>		<u>ADDRESS</u>
	<u>REGION 4</u>	
District Office Room 413, 457 Richmond Street LONDON, Ont N6A 3E3	44	Bureau de district 457, rue Richmond, Pièce 413 London (Ont.) N6A 3E3
District Office 880 Ouellette Ave., Room 803 WINDSOR, Ont N9A 1C7	71	Bureau de district 880, avenue Ouellette, Pièce 803 Windsor (Ont.) N9A 1C7
District Office, 33 South Court Street, THUNDER BAY, ONT P7B 2W6	36	Bureau de district 33, rue South Court Thunder Bay (Ont.) P7B 2W6
District Office Federal Building, Room 154 KENORA, Ont. P9N 3X9	37	Bureau de district Immeuble Federal, Piece 154 Kenora (Ont.) P9N 3X9
Regional Office 55 St. Clair Avenue East TORONTO, Ont. M4T 1M2	41	Bureau regional 55 est, Avenue St. Clair Toronto (Ont.) M4T 1M2
District Office 55 St. Clair Avenue East TORONTO, Ont. M4T 1M2	42	Bureau de district 55 est, Avenue St. Clair Toronto (Ont.) M4T 1M2
District Office 135 James Street South HAMILTON, Ont. L8P 2Z6	43	Bureau de district 135 sud, rue James Hamilton, (Ont.) L8P 2Z6
District Office 30 Duke Street West, 5th Floor, KITCHENER, Ont. N2H 3W5	45	Bureau de district 30 ouest, rue Duke, 5ieme Etage Kitchener, (Ont.) N2H 3W5
District Office 118 March Street SAULT STE MARIE, Ont. P6A 5N5	46	Bureau de district 118, rue March Sault Ste. Marie (Ont.) P6A 5N5

District Office 47  
P.O. Box 596  
NORTH BAY, Ont. P1B 8J5

Bureau de district  
C.P. 596  
North Bay (Ont.) P1B 8J5

District Office 48  
P.O. Box 633  
KINGSTON, Ont. K7L 4X1

Bureau de district  
C.P. 633  
Kingston (Ont.) K7L 4X1

District Office 49  
Trebla Bldg., 473 Albert St.,  
OTTAWA, Ont. K1R 5B4

Bureau de district  
473, rue Albert, Immeuble Trebla,  
Ottawa (Ont.) K1R 5B4

ADMINISTRATING  
OFFICE IDENTIFIER

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REGION 5

Quebec Regional Office, 2085 Union Avenue-20th Floor MONTREAL, Quebec H3A 2C3	51	Bureau régional du Québec 2085, avenue Union, 20 <sup>e</sup> étage Montréal (Qué) H3A 2C3
District Office, 2085 Union Avenue-19th Floor, MONTREAL, Que. H3A 2C3	52	Bureau de district 2085, avenue Union, 19 <sup>e</sup> étage Montreal (Qué) H3A 2C3
District Office, 315 King Street West - P.O. Box 292 SHERBROOKE, Que. J1H 5J1	53	Bureau de district C.P. 292, 315 rue King est Sherbrooke, (QUÉ) J1H 5J1
District Office, 942 Chabanel St., CHICOUTIMI, Que. G7H 5W2	54	Bureau de district 942, rue Chabanel Chicoutimi (Qué) G7H 5W2
District Office, 2 Place Quebec, Room 436, QUEBEC, Que.	55	Bureau de district 2, Place Québec, Pièce 436 Québec (Qué) G1R 2B5
District Office, Public Building - Post Office Box 67, TROIS-RIVIERES, G9A 5E3	56	Bureau de district C.P. 67, Immeuble Public Trois-Rivières (Qué) G9a 5E3
District Office, 106 Napoléan St. - Room 301, P.O. Box 724, SEPT-ILES, Que. G4R 3L7	57	Bureau de district 106, rue Napoléon, Pièce 301 B.P. 724 Sept-Iles (Qué) G4R 3L7
District Office, 32 Frederic Hebert Avenue, NORANDA, Que. J9X 1V2	58	Bureau de district 32 avenue frédéric-Hébert Noranda (Qué) J9X 1V2



ADMINISTRATING  
OFFICE IDENTIFIER

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<u>ADDRESS</u>		<u>ADDRESS</u>
<u>REGION 6</u>		
7th Floor, Terminal Plaza Bldg P.O. Box 1290, 1222 Main Street MONCTON, N.B. E1C 8P9	61	Immeuble Terminal Plaza, 7 <sup>e</sup> étage C.P. 1290, 1222, rue Main Moncton (N.-B.) E1C 8P9
Spears Building 77 Vaughan Harvey Blvd MONCTON, N.B. E1E 2B4	62	Immeuble Spears 77, boulevard Vaughan Harvey Moncton (N.-B.) E1E 2B4
9th Floor Gulf Building 6009 Quinpool Road HALIFAX, NS B3K 5J7	63	Immeuble Gulf, 9 <sup>e</sup> étage 6009, Chemin Quinpool Halifax (N.-E.) B3K 5J7
Suite 110 Cabot House 500 Kings Road SYDNEY, NS B1S 1B2	64	Immeuble Cabot, Bureau 110, 500, Chemin Kings Sydney (N.-E.) B1S 1B2
Custom House, Room 331 P.O. Box 1285, 189 Prince William SAINT JOHN, N.B. E2L 4G7	65	Bureau de la Douane, Pièce 331 C.P. 1285, 189, rue Prince William Saint-Jean (N.-B.) E2L 4G7
Sir Humphrey Gilbert Bldg., Room 616 P.O. Box 5277, Duckworth Street ST. JOHN'S NFLD A1C 5W1	66	Im. Sir Humphrey Gilbert, Pièce 616 C.P. 5277, rue Duckworth Saint-Jean (T.-N.) A1C 5W1
P.O. Box 155 BATHURST, N.B. E2A 3Z2	67	Case Postale 155 Bathurst (N.-B.) E2A 3Z2
Federal Building P.O. Box 572, Main Street CORNER BROOK, NFLD A2H 6G1	68	Immeuble Fédéral C.P. 572, rue main Corner Brook (T.-N.) A2H 6G1
P.O. Box 458 MONTAGUE, P.E.I. COA 1R0	69	C.P. 458 Montague (I.P.-E.) COA 1R0

LINE # .....5...10...15...20...25...30...35...40...45...50...55...60...65...70...75...80

A-1

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 2  
 3 118.00-123.05 MC/S 6A3 AIR TRAFFIC CONTROL  
 4 123.60-128.825 MC/S - - -  
 5 132.025-134.95 MC/S - - -  
 6 121.50 MC/S - EMERGENCY  
 7 122.10 MC/S - MOT AERADIO STATIONS  
 8 122.20 MC/S - MOT AERADIO STATIONS AND RADAR ADVISORY  
 9 122.80 MC/S - PRIVATE ADVISORY  
 10 122.90 MC/S - AERONAUTICAL MULTICOM STATIONS  
 11 126.70 MC/S - MOT AERADIO STATIONS  
 12 121.5/243 MC/S 2A2/6A3 SURVIVAL CRAFT  
 13  
 14 BY INTERNATIONAL AGREEMENT, 100 KC/S PROTECTION IS PROVIDED FOR 121.5 MC/S.  
 15  
 16 THE FREQUENCY 126.20 MC/S IS PRIMARILY A MILITARY CHANNEL AND MAY ONLY BE USED  
 17 BY CIVIL AIRCRAFT, WHEN AUTHORIZED, WITH EXTREME CAUTION WHEN SERVICE IS NOT  
 18 AVAILABLE ON OTHER VHF CHANNELS.

A-2

1 118.00-123.05 MC/S 6A3 CONTROLE DE LA CIRCULATION AERIENNE  
 2 123.60-128.825 MC/S - - -  
 3 132.025-134.95 MC/S - - -  
 4 121.50 MC/S - URGENCE  
 5 122.10 MC/S - STATIONS RADIOAERONAUTIQUES DU MIN. DES  
 6 TRANSPORTS  
 7 122.20 MC/S - STATIONS RADIOAERONAUTIQUES DU MIN. DES  
 8 TRANSPORTS ET CONSULTATION RADAR  
 9 122.80 MC/S - SERVICE PRIVE DE CONSULTATION  
 10 122.90 MC/S - STATIONS AERONAUTIQUES A COMMUNICATIONS  
 11 MULTIPLES  
 12 126.70 MC/S - STATIONS RADIOAERONAUTIQUES DU MIN. DES  
 13 TRANSPORTS  
 14 121.5/243 MC/S 2A2/6A3 SURVIVANCE  
 15  
 16 UNE PROTECTION DE 100 KC/S EST ACCORDEE A LA FREQUENCE 121.5 MC/S,  
 17 SELON UN ACCORD INTERNATIONAL.  
 18  
 19 LA FREQUENCE 126.20 MC/S EST PRINCIPALEMENT UNE VOIE MILITAIRE ET PEUT ETRE  
 20 UTILISEE PAR UN AERONEF CIVIL, SEULEMENT LORSQUE CELA EST AUTORISE ET EN PRENANT  
 21 DES PRECAUTIONS EXTREMES, LORSQUE LE SERVICE N'EST PAS POSSIBLE SUR D'AUTRES  
 22 VOIES VHF.

B-1

1 -----  
 2  
 3 CONDITIONS OF LICENSING - PRIVATE ADVISORY  
 4 FACILITY CONTROLLED AIRPORT  
 5  
 6  
 7 AIRCRAFT MUST MAINTAIN CONTINUOUS GUARD ON APPROPRIATE CONTROL  
 8 TOWER OR AERADIO STATION FREQUENCIES WHILE WITHIN THE AIRPORT  
 9 CONTROL ZONE. ALL NECESSARY COMMUNICATIONS DESTINED FOR THE  
 10 MINISTRY OF TRANSPORT RADIO FACILITIES SHALL BE CARRIED OUT  
 11 DIRECTLY WITH SUCH FACILITIES RATHER THAN THROUGH THE INTER-  
 12 MEDIARY OF THE PRIVATELY OPERATED GROUND STATIONS.

LINE # .....5...10...15...20...25...30...35...40...45...50...55...60...65...70...75...80

13 COMMUNICATIONS BETWEEN GROUND STATIONS AND AIRCRAFT ON THE  
14 HEREIN LICENSED ADVISORY FREQUENCY SHALL BE RESTRICTED TO THE  
15 HANDLING OF MESSAGES IN CONNECTION WITH COMPANY BUSINESS,  
16 AVAILABILITY OF FUEL, LODGING OR SUCH OTHER INFORMATION AS  
17 MAY BE INTENDED SOLELY TO FACILITATE THE EXPEDITIOUS AND  
18 EFFICIENT OPERATION OF AIRCRAFT. POINT-TO-POINT COMMUNICATIONS  
19 AND THE HANDLING OF MESSAGES RELATED TO AIRPORT OR AREA  
20 TRAFFIC CONTROL IS NOT PERMISSIBLE.

1 -----  
2 CONDITIONS DE DELIVRANCE DE LA LICENCE -  
3 INSTALLATION POUR SERVICE CONSULTATIF PRIVE AEROPORT CONTROLE  
4

B-2

5 LES AERONEFS DOIVENT ASSUPER UNE ECOUTE CONTINUELLE SUR LES FREQUENCES APPRO-  
6 PRIEES DE LA TOUR DE CONTROLE OU DE LA STATION RADIO-AERONAUTIQUE ALORS QU'ILS  
7 SE TROUVENT DANS LES LIMITES DE LA ZONE DE CONTROLE DE L'AEROPORT. TOUTES  
8 LES COMMUNICATIONS NECESSAIRES, DESTINEES AUX INSTALLATIONS RADIO DU MINISTERE  
9 DES TRANSPORTS, DOIVENT ETRE EFFECTUEES DIRECTEMENT AVEC CES INSTALLATIONS  
10 PLUTOT QUE PAR L'INTERMEDIAIRE DES STATIONS AU SOL EXPLOITEES DE FACON PRIVEE.  
11

12 LES COMMUNICATIONS ENTRE LES STATIONS AU SOL ET LES AERONEFS SUR LA FREQUENCE DE  
13 SERVICE CONSULTATIF AUTORISEE PAR LES PRESENTES, DOIVENT ETRE LIMITEES A  
14 L'ACHEMINEMENT DES MESSAGES CONCERNANT LES AFFAIRES DE LA COMPAGNIE. LA  
15 DISPONIBILITE DE CARBURANT, LE LOGEMENT OU D'AUTRES RENSEIGNEMENTS SEMBLABLES  
16 DESTINES UNIQUEMENT A FACILITER LA CIRCULATION RAPIDE ET EFFICACE DES AERONEFS.  
17 LES COMMUNICATIONS DE POINT A POINT ET L'ACHEMINEMENT DE MESSAGES CONCERNANT  
18 LE CONTROLE DE LA CIRCULATION AERIENNE AUX AEROPORTS ET DANS LA REGION NE SONT  
19 PAS PERMIS.

1 -----  
2 CONDITIONS OF LICENSING - FLIGHT TEST FACILITY  
3

C-1

4 AIRCRAFT MUST MAINTAIN A CONTINUOUS GUARD ON APPROPRIATE CONTROL TOWER OR  
5 AERADIO STATION FREQUENCIES WHILE WITHIN THE AIRPORT CONTROL ZONE. ALL  
6 NECESSARY COMMUNICATIONS DESTINED FOR MINISTRY OF TRANSPORT RADIO FACILITIES  
7 SHALL BE CARRIED OUT DIRECTLY WITH SUCH FACILITIES RATHER THAN THROUGH THE  
8 INTERMEDIARY OF THE FLIGHT TEST GROUND STATION.  
9

10 THE USE OF THE HEREIN LICENSED FLIGHT TEST FREQUENCY SHALL BE STRICTLY LIMITED  
11 TO MESSAGES CONTAINING INSTRUCTIONS ESSENTIAL TO THE TESTING OF AIRCRAFT  
12 COMPONENTS.  
13

14 THE ESTABLISHMENT AND OPERATION OF A GROUND STATION ON THE HEREIN LICENSED  
15 FLIGHT TEST FREQUENCY IS AUTHORIZED SOLELY ON THE UNDERSTANDING THAT AIRCRAFT  
16 FLIGHTS WILL NOT BE PREDICATED ON THE BASIS OF THE USE OF SUCH STATION, WHICH  
17 FLIGHTS WOULD NOT HAVE BEEN UNDERTAKEN IF THE STATION DID NOT EXIST.

APPENDIX C-2

1 -----  
2 CONDITIONS DE DELIVRANCE DE LA LICENCE -  
3 INSTALLATION POUR ESSAIS EN VOL  
4

C-2

5 LES AERONEFS DOIVENT ASSURER UNE ECOUTE CONTINUELLE SUR LES FREQUENCES  
6 APPROPRIEES DE LA TOUR DE CONTROLE OU DE LA STATION RADIOAERONAUTIQUE ALORS  
7 QU'ILS SE TROUVENT DANS LES LIMITES DE LA ZONE DE CONTROLE DE L'AEROPORT.

LINE # .....5....10....15....20....25....30....35....40....45....50....55....60....65....70....75....80

8 TOUTES LES COMMUNICATIONS NECESSAIRES, DESTINEES AUX INSTALLATIONS RADIO DU  
9 MINISTERE DES TRANSPORTS, DOIVENT ETRE EFFECTUEES DIRECTEMENT AVEC CES  
10 INSTALLATIONS PLUTOT QUE PAR L'INTERMEDIAIRE DE LA STATION AU SOL UTILISEE POUR  
11 LES ESSAIS EN VOL.

12 L'UTILISATION DE LA FREQUENCE POUR ESSAIS EN VOL AUTORITEE PAR LES PRESENTES,  
13 DOIT ETRE STRICTEMENT LIMITEE A L'ACHEMINEMENT DES INSTRUCTIONS ESSENTIELLES A  
14 L'ESSAI DE PIÈCES D'AERONEF.

15 L'ETABLISSEMENT ET L'EXPLOITATION D'UNE STATION AU SOL SUR LA FREQUENCE POUR  
16 ESSAIS EN VOL AUTORISEE PAR LES PRESENTES, SONT AUTORISEES UNIQUEMENT A LA  
17 CONDITION QUE LES VOLS DES AERONEFS NE SOIENT PAS FONDES SUR L'EMPLOI DE CETTE  
18 STATION, LESQUELS VOLS N'AURAIENT PAS ETE ENTREPRIS SI LA STATION N'AVAIT PAS  
19 EXISTE.  
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21

1 -----  
2 CONDITIONS OF LICENSING - FLIGHT TRAINING FACILITY  
3

4 AIRCRAFT MUST MAINTAIN CONTINUOUS GUARD ON APPROPRIATE CONTROL TOWER OR RADIO  
5 RANGE FREQUENCIES WHILE WITHIN THE AIRPORT CONTROL ZONE. ALL NECESSARY  
6 COMMUNICATIONS DESTINED FOR MINISTRY OF TRANSPORT RADIO FACILITIES SHALL BE  
7 CARRIED OUT DIRECTLY WITH SUCH FACILITIES RATHER THAN THROUGH THE INTERMEDIARY  
8 OF THE FLYING SCHOOL GROUND STATIONS.  
9

D-1

10 COMMUNICATIONS BETWEEN GROUND STATIONS AND AIRCRAFT ON THE HEREIN LICENSED  
11 FLIGHT TRAINING FREQUENCY SHALL BE RESTRICTED TO THE HANDLING OF MESSAGES  
12 CONTAINING INSTRUCTIONS ESSENTIAL TO FLIGHT TRAINING. AVAILABILITY OF RE-FUELING  
13 AND MAINTENANCE FACILITIES, OR SUCH OTHER INFORMATION AS MAY BE INTENDED SOLELY  
14 TO FACILITATE THE EXPEDITIOUS AND EFFICIENT OPERATION OF AIRCRAFT.  
15 POINT-TO-POINT COMMUNICATIONS AND THE HANDLING OF MESSAGES RELATED TO AIRPORT  
16 OR AREA TRAFFIC CONTROL IS NOT PERMISSIBLE.  
17

18 THE ESTABLISHMENT AND OPERATION OF A GROUND STATION ON THE HEREIN LICENSED  
19 FLIGHT TRAINING FREQUENCY IS AUTHORIZED SOLELY ON THE UNDERSTANDING THAT  
20 AIRCRAFT FLIGHTS WILL NOT BE PREDICATED ON THE BASIS OF THE USE OF SUCH STATION,  
21 WHICH FLIGHTS WOULD NOT HAVE BEEN UNDERTAKEN IF THE STATION DID NOT EXIST.

1 -----  
2 CONDITIONS DE DELIVRANCE DE LA LICENCE-INSTALLATION POUR L'ENTRAINEMENT AU VOL  
3

4 LES AERONEFS DOIVENT ASSURER UNE ECOUTE CONTINUELLE SUR LES FREQUENCES  
5 APPROPRIEES DE LA TOUR DE CONTROLE OU DU RADIOPHARE D'ALIGNEMENT ALORS QU'ILS  
6 SE TROUVENT DANS LES LIMITES DE LA ZONE DE CONTROLE DE L'AEROPORT. TOUTES LES  
7 COMMUNICATIONS NECESSAIRES, DESTINEES AUX INSTALLATIONS RADIO DU MINISTERE DES  
8 TRANSPORTS, DOIVENT ETRE EFFECTUEES DIRECTEMENT AVEC CES INSTALLATIONS PLUTOT  
9 QUE PAR L'INTERMEDIAIRE DES STATIONS AU SOL DES ECOLES DE PILOTAGE.

D-2

10 LES COMMUNICATIONS ENTRE LES STATIONS AU SOL ET LES AERONEFS SUR LA FRE-  
11 QUENCE D'ENTRAINEMENT AU VOL AUTORISEE PAR LES PRESENTES, DOIVENT ETRE LIMITEES  
12 AUX MESSAGES CONTENANT DES INSTRUCTIONS ESSENTIELLES A L'ENTRAINEMENT AU VOL OU  
13 CONCERNANT LA DISPONIBILITE D'INSTALLATIONS DE RAVITAILLEMENT EN CARBURANT ET  
14 D'ENTRETIEN, OU DONNANT D'AUTRES RENSEIGNEMENTS SEMBLABLES DESTINES UNIQUEMENT  
15 A FACILITER LA CIRCULATION RAPIDE ET EFFICACE DES AERONEFS. LES COMMUNICATIONS  
16 DE POINT A POINT ET L'ACHEMINEMENT DE MESSAGES CONCERNANT LE CONTROLE DE LA  
17 CIRCULATION AERPIENNE AUX AEROPORTS ET DANS LA REGION NE SONT PAS PERMIS.

LINE # .....5....10....15....20....25....30....35....40....45....50....55....60....65....70....75....80

18 L'ETABLISSEMENT ET L'EXPLOITATION D'UNE STATION AU SOL SUR LA FREQUENCE  
19 D'ENTRAINEMENT AU VOL AUTORISEE PAR LES PRESENTES, SONT AUTORISEES UNIQUEMENT  
20 A LA CONDITION QUE LES VOLS DES AERONEFS NE SOIENT PAS FONDES SUR L'EMPLOI DE  
21 CETTE STATION, LESQUELS VOLS N'AURAIENT PAS ETE ENTREPRIS SI LA STATION  
22 N'AVAIT PAS EXISTE.

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CONDITIONS OF LICENSING - BEACON FACILITY

E-1

THE OPERATION OF THE HEREIN LICENSED BEACON FACILITY  
SHALL BE STRICTLY LIMITED TO BEACON TRANSMISSIONS,  
AND SERVICE TO ANY AND ALL AIRCRAFT FOR HOMING  
PURPOSES MAY BE REQUIRED OR PERMITTED AT THE DISCRE-  
TION OF THE MINISTER.

THIS LICENCE IS GRANTED ON A TEMPORARY BASIS AND WILL  
BECOME VOID UPON ONE MONTH'S NOTICE IN THE EVENT OF  
THE ESTABLISHMENT OF SIMILAR FACILITIES BY A  
DEPARTMENT OF THE GOVERNMENT.

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CONDITIONS DE DELIVRANCE DE LA LICENCE -  
INSTALLATIONS DE RADIOPHARE

E-2

L'EXPLOITATION DE L'INSTALLATION DE RADIOPHARE  
AUTORISEE PAR LES PRESENTES DOIT ETRE STRICTEMENT  
LIMITEE AUX TRANSMISSIONS DE RADIOPHARE, ET LE  
MINISTRE POURRA EXIGER OU PERMETTRE QU'UN SERVICE  
SOIT ASSURE A N'IMPORTE QUEL AERONEF OU A TOUS LES  
AERONEFS AUX FINS DE RADIORALLIEMENT.

LA PRESENTE LICENCE EST ACCORDEE A TITRE TEMPORAIRE  
ET SERA ANNULEE APRES UN PREAVIS D'UN MOIS SI UN  
MINISTRE DU GOUVERNEMENT ETABLIT DE SEMBLABLES  
INSTALLATIONS.

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CONDITIONS OF LICENSING - PRIVATE ADVISORY  
FACILITY NON-CONTROLLED AIRPORT

F-1

THE USE OF THE HEREIN LICENSED FREQUENCY SHALL BE LIMITED TO  
THE HANDLING OF MESSAGES PERTAINING TO THE CONDITION OF RUN-  
WAYS OR LANDING STRIPS. WEATHER REPORTS. AVAILABILITY OF  
REFUELING AND MAINTENANCE FACILITIES OR SUCH OTHER LIKE INFOR-  
MATION AS MAY BE INTENDED SOLELY TO FACILITATE THE EXPEDITIOUS  
AND EFFICIENT OPERATION OF AIRCRAFT. THE HANDLING OF MESSAGES  
RELATING TO AIRPORT OR AIRWAYS TRAFFIC CONTROL IS NOT  
PERMISSIBLE.

THIS LICENCE IS GRANTED ON THE UNDERSTANDING THAT AIRCRAFT  
FLIGHTS WILL NOT BE PREDICATED ON THE BASIS OF THE USE OF THE



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HEREIN LICENSED STATION, WHICH FLIGHTS WOULD NOT HAVE BEEN UNDERTAKEN IF THE STATION DID NOT EXIST.

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CONDITIONS DE DELIVRANCE DE LA LICENCE - INSTALLATION  
POUR SERVICE CONSULTATIF PRIVE AEROPORT NON CONTROLE

F-2

L'EMPLOI DE LA FREQUENCE MENTIONNEE SUR LA PRESENTE LICENCE DOIT ETRE LIMITE A L'ACHEMINEMENT DE MESSAGES CONCERNANT L'ETAT DES PISTES OU DES RANDONNEES D'ATTERRISSAGE, LES CONDITIONS METEOROLOGIQUES OU LA DISPONIBILITE D'INSTALLATIONS DE RAVITAILLEMENT EN CARBURANT ET D'ENTRETIEN, OU DONNANT D'AUTRES RENSEIGNEMENTS SEMBLABLES DESTINES UNIQUEMENT A FACILITER LA CIRCULATION RAPIDE ET EFFICACE DES AERONEFS. L'ACHEMINEMENT DE MESSAGES RELATIFS AU CONTROLE DE LA CIRCULATION AERIEENNE AUX AEROPORTS ET SUR LES VOIES AERIEENNES N'EST PAS PERMIS.

LA PRESENTE LICENCE EST DELIVREE A LA CONDITION QUE LES VOLS DES AERONEFS NE SERONT PAS FONDES SUR L'EMPLOI DE LA STATION FAISANT L'OBJET DE LA PRESENTE LICENCE, LESQUELS VOLS N'AURAIENT PAS ETE ENTREPRIS SI LA STATION N'AVAIT PAS EXISTE.

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UNLESS SPECIFICALLY AUTHORIZED BY THE MINISTER, THIS LICENCE DOES NOT PERMIT THE LICENCEE TO TRANSMIT SIGNALS THAT HAVE EMANATED FROM BROADCASTING STATIONS, EITHER WITHIN OR WITHOUT CANADA, AND ARE DESTINED TO BE FED INTO A CABLE DISTRIBUTION SYSTEM FOR RECEPTION BY HOME TELEVISION RECEIVERS CONNECTED TO THAT CABLE DISTRIBUTION SYSTEM.

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A MOINS D'UNE AUTORISATION EXPRESSE DU MINISTRE, LA PRESENTE LICENCE N'AUTORISE PAS SON TITULAIRE A TRANSMETTRE DES SIGNAUX QUI PROVIENNENT DE STATIONS DE RADIODIFFUSION A L'INTERIEUR OU A L'EXTERIEUR DU CANADA ET QUI SONT DESTINES A ALIMENTER UN SYSTEME DE DISTRIBUTION PAR CABLE AUX FINS DE RECEPTION PAR LES RECEPTEURS DE TELEVISION DOMESTIQUES RACCORDES A CE SYSTEME DE DISTRIBUTION PAR CABLE.

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THE GRANTING OF THIS LICENCE IS SUBJECT TO THE CONDITIONS SPECIFIED HEREUNDER.

1. THE STATION SHALL BE OPERATED, AS PART OF A MICROWAVE SYSTEM BETWEEN SYDNEY MINES, N.S. AND ST. GEORGE, N.B., IN ACCORDANCE WITH:

a) THE PROVISIONS OF THE TRANS-ATLANTIC CABLE CONSTRUCTION AND MAINTENANCE CONTRACT, DATED NOVEMBER 27, 1953, BETWEEN THE POSTMASTER GENERAL, U.K., AMERICAN TELEPHONE AND TELEGRAPH COMPANY, CANADIAN OVERSEAS TELECOMMUNI-

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- 9 CATION CORPORATION, AND EASTERN TELEPHONE AND TELEGRAPH COMPANY;  
 10 B) THE AGREEMENT FOR USE OF PORTION OF TRANS-ATLANTIC CABLE SYSTEM, DATED  
 11 SEPTEMBER 30, 1957, BETWEEN THE POSTMASTER GENERAL, U.K., AMERICAN  
 12 TELEPHONE AND TELEGRAPH COMPANY, CANADIAN OVERSEAS TELECOMMUNICATION  
 13 CORPORATION, EASTERN TELEPHONE AND TELEGRAPH COMPANY, FRENCH REPUBLIC,  
 14 AND THE FEDERAL REPUBLIC OF GERMANY;  
 15 C) SUCH CONDITIONS AS THE MINISTER OF COMMUNICATIONS MAY PRESCRIBE FROM TIME  
 16 TO TIME.

17 2. THE STATION EQUIPMENT AND CIRCUITS SHALL CONSIST OF:-  
 18

19 EQUIPMENT  
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- 21 A) NORTHERN ELECTRIC AND WESTERN ELECTRIC TYPE TD-2 TRANSMITTING AND  
 22 RECEIVING EQUIPMENT TO PROVIDE TWO CIRCUITS IN EACH DIRECTION, ONE FOR  
 23 REGULAR SERVICE AND ONE FOR PROTECTION.  
 24 B) WESTERN ELECTRIC TYPE KS-15676 HORN-REFLECTOR ANTENNAE.  
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26 CIRCUITS  
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- 28 A) U.S.A./EUROPE  
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30 SUBJECT TO THE RESTRICTION SPECIFIED IN 5) BELOW - BETWEEN POINTS IN OR  
 31 REACHED VIA THE UNITED STATES AND POINTS IN OR REACHED VIA THE UNITED  
 32 KINGDOM OR FRANCE.  
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- 34 1) CIRCUITS TO FURNISH A PUBLIC TELEPHONE, TELEGRAPH, FACSIMILE AND  
 35 TELEPHOTO SERVICE;  
 36 2) CIRCUITS TO FURNISH PRIVATE TELEPHONE, TELEGRAPH (INCLUDING DIGITAL  
 37 DATA) FACSIMILE AND TELEPHOTO SERVICE;  
 38 3) CIRCUITS TO FURNISH SUCH OTHER INTERNATIONAL AND DOMESTIC COMMUNICATION  
 39 SERVICES AS CANADIAN OVERSEAS TELECOMMUNICATION CORPORATION HAS AGREED  
 40 TO, OR MAY AGREE TO, IN WRITING;  
 41 4) CIRCUITS ESSENTIAL FOR SYSTEM MAINTENANCE PURPOSES;  
 42 5) CIRCUITS WHICH MAY BE LEASED OR MADE AVAILABLE UNDER AN INDEFEASIBLE  
 43 RIGHT OF USER BASIS TO INTERNATIONAL COMMUNICATION CARRIERS TO PROVIDE  
 44 THE SERVICES REFERRED TO IN 1) AND 2) PROVIDED THAT THE LICENSEE HAS  
 45 OBTAINED FROM SUCH CARRIERS FOR SUBMISSION TO THE DEPARTMENT OF  
 46 TRANSPORT, AND UNDERTAKING THAT THEY WILL NOT HANDLE OR PERMIT TO BE  
 47 HANDLED ANY COMMUNICATION TRAFFIC OF ANY KIND TO OR FROM CANADA ON  
 48 CIRCUITS LEASED TO THEM OR MADE AVAILABLE UNDER AN INDEFEASIBLE RIGHT  
 49 OF USER BASIS IN TAT 1, TAT 2, OR EFFECTIVE JULY 1, 1960 ON ANY  
 50 CIRCUITS WHICH THEY MAY OWN, IN WHOLE OR IN PART, OR LEASE OR HAVE  
 51 AVAILABLE UNDER AN INDEFEASIBLE RIGHT OF USER ARRANGEMENT IN ANY OTHER  
 52 TELECOMMUNICATION FACILITY TERMINATING IN OR TRANSITING THE U.S.A.  
 53 WITHOUT THE SPECIFIC AUTHORITY OF THE MINISTER OF THE DEPARTMENT OF  
 54 COMMUNICATIONS.  
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- 56 B) CANADA/U.K.  
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- 58 1) CIRCUITS TO FURNISH A PUBLIC TELEPHONE, TELEGRAPH, FACSIMILE AND  
 59 TELEPHOTO SERVICE;  
 60 2) CIRCUITS WHICH MAY BE LEASED FOR PRIVATE TELEPHONE, TELEGRAPH  
 61 (INCLUDING DIGITAL DATA) FACSIMILE AND TELEPHOTO SERVICE;

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- 63 3) CIRCUITS ESSENTIAL FOR SYSTEM MAINTENANCE PURPOSES.  
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 65 C) EXCESS CIRCUIT CAPACITY  
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 67 CIRCUIT CAPACITY IN EXCESS OF THOSE CIRCUITS NECESSARY TO FURNISH THE  
 68 SERVICES REFERRED TO IN A) AND B) ABOVE SHALL BE MADE AVAILABLE TO THE  
 69 CANADIAN OVERSEAS TELECOMMUNICATION CORPORATION FOR:  
 70  
 71 1) LEASING TO CANADIAN TELECOMMUNICATION COMPANIES FOR DOMESTIC USE  
 72 (INCLUDING CONNECTION TO FACILITIES IN THE UNITED STATES) IN A  
 73 NON-DISCRIMINATING MANNER;  
 74 2) THE ALTERNATE ROUTING OF CANADIAN OVERSEAS TELECOMMUNICATION  
 75 CORPORATION TRAFFIC DURING INTERRUPTIONS TO THE TRANS-ATLANTIC  
 76 TELEPHONE CABLE, REFERRED TO IN THE TRANS-ATLANTIC CABLE CONSTRUCTION  
 77 AND MAINTENANCE CONTRACT, REFERENCE ) A) ABOVE.  
 78 3) AUTHORITY TO EMPLOY THE HORN-REFLECTOR ANTENNAE REFERRED TO IN 2.  
 79 ABOVE, FOR SIMULTANEOUS TRANSMISSION AND RECEPTION EMPLOYING THE  
 80 SO-CALLED 'SINGLE ANTENNA' TECHNIQUE, SHALL BE SUBJECT TO WITHDRAWAL  
 81 SHOULD THE MINISTER CONSIDER THAT THE USE OF THESE ANTENNA AT THE  
 82 HEREIN LICENSED STATION DOES NOT PERMIT THE MOST ECONOMICAL USE OF  
 83 FREQUENCIES IN THE PORTION OF THE RADIO SPECTRUM INVOLVED.  
 84 4) THE LICENSEE MAY BE REQUIRED TO MAKE ANTENNA SYSTEM CHANGES, INCLUDING  
 85 SITE AND/OR ORIENTATION, SHOULD THE MINISTER CONSIDER SUCH ACTION IS  
 86 NECESSARY TO MITIGATE OR REDUCE THE POSSIBILITY OF INTERFERENCE TO THE  
 87 SERVICE PROVIDED BY OTHER RADIO STATIONS.

H-2

- 1 LA PRESENTE LICENCE EST DELIVREE SOUS RESERVE DES CONDITIONS MENTIONNEES  
 2 CI-DESSOUS.  
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 4 1. LA STATION CERA EXPLOITEE EN TANT QUE FAISANT PARTIE D'UN SYSTEME A  
 5 MICRO-ONDES ENTRE SYDNEY MINES. (N.-E.), ET SAINT-GEORGE (N.-B.), EN  
 6 CONFORMITE:  
 7  
 8 A) DES DISPOSITIONS DU CONTRAT DE CONSTRUCTION ET D'ENTRETIEN DU CABLE  
 9 TRANSATLANTIQUE, DATE DU 27 NOVEMBRE 1953, ENTRE LE MINISTRE DES POSTES  
 10 DU ROYAUME-UNI, L'AMERICAN TELEPHONE AND TELEGRAPH COMPANY, LA SOCIETE  
 11 CANADIENNE DES TELECOMMUNICATIONS TRANSMARINES, ET L'EASTERN TELEPHONE  
 12 AND TELEGRAPH COMPANY;  
 13 B) DE L'ACCORD SUR L'UTILISATION D'UNE PARTIE DU SYSTEME DE CABLE  
 14 TRANSATLANTIQUE, DATE DU 30 SEPTEMBRE 1957, ENTRE LE MINISTRE DES POSTES  
 15 DU ROYAUME-UNI, L'AMERICAN TELEPHONE AND TELEGRAPH COMPANY, LA SOCIETE  
 16 CANADIENNE DES TELECOMMUNICATIONS TRANSMARINES, L'EASTERN TELEPHONE AND  
 17 TELEGRAPH COMPANY, LA REPUBLIQUE FRANCAISE, ET LA REPUBLIQUE FEDERALE  
 18 D'ALLEMAGNE;  
 19 C) DES CONDITIONS QUI PEUVENT ETRE PRESCRITES DE TEMPS EN TEMPS PAR LE  
 20 MINISTRE DES COMMUNICATIONS.  
 21  
 22 2. LE MATERIEL ET LES CIRUITS DE LA STATION COMPRENDONT CE QUI SUIT:  
 23  
 24 MATERIEL  
 25  
 26 A) UN MATERIEL DE TRANSMISSION ET DE RECEPTION NORTHERN ELECTRIC ET WESTERN  
 27 ELECTRIC DU TYPE TD-2 POUR FOURNIR DEUX CIRCUITS DANS CHAQUE DIRECTION.  
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L'UN POUR LE SERVICE REGULIER ET L'AUTRE AUX FINS DE PROTECTION.  
B) DES ANTENNES A REFLECTEUR ET CORNET DU TYPE KS-15676 WESTERN ELECTRIC.

# CIRCUITS

## A) E.U.A./EUROPE

SOUS RESERVE DE LA RESTRICTION MENTIONNEE EN 5) CI-DESSOUS, ENTRE DES POINTS SITUES AUX ETATS-UNIS OU ATTEINTS VIA LES ETATS-UNIS ET DES POINTS SITUES AU ROYAUME-UNI OU EN FRANCE, OU ATTEINTS VIA CES DEUX DERNIERS PAYS.

- 1) CIRCUITS POUR ASSURER UN SERVICE PUBLIC DE TELEPHONE, DE TELEGRAPHE, DE FAC-SIMILE ET DE TELEPHOTO;
- 2) CIRCUITS POUR ASSURER UN SERVICE PRIVE DE TELEPHONE, DE TELEGRAPHE (Y COMPRIS LES DONNEES NUMERIQUES), DE FAC-SIMILE ET DE TELEPHOTO;
- 3) CIRCUITS POUR ASSURER TOUT AUTRES SERVICES INTERNATIONAUX ET NATIONAUX QUE LA SOCIETE CANADIENNE DES TELECOMMUNICATIONS TRANSMARINES A ACCEPTE, OU POURRA ACCEPTE, PAR ECRIT, D'ASSURER;
- 4) CIRCUITS ESSENTIELS POUR L'ENTRETIEN DU SYSTEME;
- 5) CIRCUITS QUI PEUVENT ETRE LOUES OU RENDUS DISPONIBLES, EN VERTU D'UN DROIT D'USAGER IRREVOCABLE, AUX SOCIETES INTERNATIONALES D'EXPLOITATION DE TELECOMMUNICATIONS POUR FOURNIR LES SERVICES MENTIONNES EN 1) ET EN 2). A CONDITION QUE LE TITULAIRE DE LA LICENCE AIT OBTENU DE TELLES SOCIETES EXPLOITANTES, POUR PRESENTATION AU MINISTRE DES COMMUNICATIONS, UN ENGAGEMENT QU'ELLES N'ACHEMINERONT NI NE PERMETTRONT QUE SOIT ACHEMINE AUCUN TRAFIC DE COMMUNICATION DE QUELQUE GENRE QUE CE SOIT A DESTINATION OU EN PROVENANCE DU CANADA SUR DES CIRCUITS QUI LEUR SONT LOUES OU RENDUS DISPONIBLES, EN VERTU D'UN DROIT D'USAGER IRREVOCABLE, DANS TAT 1, TAT 2, OU, A PARTIR DU 1ER JUILLET 1960, SUR TOUT CIRCUIT QUI PEUT LEUR APPARTENIR, EN TOUT OU EN PARTIE, OU QU'ILS PEUVENT LOUER OU AVOIR A LEUR DISPOSITION EN VERTU D'UN ARRANGEMENT IRREVOCABLE DE DROIT D'USAGER DANS TOUTE AUTRE INSTALLATION DE TELECOMMUNICATION ABOUTISSANT AUX ETATS-UNIS OU PASSANT PAR LES ETATS-UNIS, SANS L'AUTORISATION PRECISE DU MINISTRE DES COMMUNICATIONS.

## B) CANADA/ROYAUME-UNI

- 1) CIRCUITS DESTINES A ASSURER UN SERVICE PUBLIC DE TELEPHONE, DE TELEGRAPHE, DE FAC-SIMILE ET DE TELEPHOTO;
- 2) CIRCUITS POUVANT ETRE LOUES POUR UN SERVICE PRIVE DE TELEPHONE, DE TELEGRAPHE (Y COMPRIS LES DONNEES NUMERIQUES), DE FAC-SIMILE ET DE TELEPHOTO;
- 3) CIRCUITS ESSENTIELS POUR L'ENTRETIEN DU SYSTEME.

## C) CAPACITE EN CIRCUITS EXCEDENTAIRES

UNE CAPACITE EN CIRCUITS EXCEDANT LES CIRCUITS NECESSAIRES POUR ASSURER LES SERVICES MENTIONNES EN A) ET EN B) CI-DESSUS DEVRA ETRE MISE A LA DISPOSITION DE LA SOCIETE CANADIENNE DES TELECOMMUNICATIONS TRANSMARINES:

- 1) POUR LA LOCATION AUX SOCIETES CANADIENNES DE TELECOMMUNICATIONS AUX FINS D'UTILISATION NATIONALE (Y COMPRIS LA CONNECTION AUX INSTALLATIONS DES ETATS-UNIS) D'UNE MANIERE NON-DISCRIMINATOIRE;

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- 83 2) POUR L'ACHEMINEMENT, PAR UNE AUTRE VOIE, DU TRAFIC DE LA SOCIÉTÉ  
84 CANADIENNE DES TELECOMMUNICATIONS TRANSMARINES PENDANT LES INTER-  
85 RUPTIONS DU CABLE TELEPHONIQUE TRANSATLANTIQUE, MENTIONNE DANS LE  
86 CONTRAT DE CONSTRUCTION ET D'ENTRETIEN DU CABLE TRANSATLANTIQUE,  
87 REFERENCE 1 A) CI-DESSUS.  
88 3) L'AUTORISATION D'UTILISER L'ANTENNE A REFLECTEUR ET CORNET MENTIONNEE  
89 EN CI-DESSUS, POUR LA TRANSMISSION ET LA RECEPTION SIMULANEEES,  
90 UTILISANT LA TECHNIQUE DITE DE L'ANTENNE SIMPLE, SERA SUJETTE A  
91 ANNULATION SI LE MINISTRE CONSIDERE QUE L'UTILISATION DE CES ANTENNES  
92 PAR LA STATION AUTORISEE PAR LES PRESENTES NE PERMET PAS L'UTILISATION  
93 LA PLUS ECONOMIQUE DES FREQUENCES DANS LA PARTIE EN CAUSE DU SPECTRE  
94 RADIOELECTRIQUE.  
95 4) LE TITULAIRE DE LA LICENCE PEUT ETRE TENU D'APPORTER DES MODIFICATIONS  
96 AU SYSTEME D'ANTENNE, ET D'EN CHANGER L'EMPLACEMENT ET (OU) L'ORIENTA-  
97 TION, SI LE MINISTRE CONSIDERE QU'UNE TELLE MESURE EST NECESSAIRE POUR  
98 ATTENUER OU DIMINUER LA POSSIBILITE DE BROUILLAGE DU SERVICE ASSURE  
99 PAR LES AUTRES STATIONS RADIO.

I-1

FREQUENCY IN KC/S	EMISSION	AUTHORIZED COMMUNICATIONS
1630 2340	6A3, 2.8A3J/H	GOVERNMENT COAST STATIONS
1650	6A3, 2.8A3J/H	NAVIGATIONAL, VANCOUVER HARBOUR
2015 2166	6A3, 2.8A3J/H	B.C. TELEPHONE CO.
2054	6A3, 2.8A3J/H	GOVERNMENT COAST STATIONS (DAYTIME)
2182	6A3, 2.8A3H	DISTRESS AND CALLING
2318 2638 2738	6A3, 2.8A3J/H	INTERSHIP
2708 2798 4123.6	2.8A3J	B.C. TELEPHONE CO.
4133.2	6A3, 2.8A3J/H	GOVERNMENT COAST STATIONS

FREQUENCIES SHOWN ARE CARRIER FREQUENCIES. FOR SINGLE SIDE-BAND EMISSION THE ASSIGNED FREQUENCY IS 1.4 KC/S HIGHER.

SHIP STATIONS ARE AUTHORIZED TO USE ANY FREQUENCIES AS DIRECTED BY FOREIGN COAST STATIONS FOR COMMUNICATION IN THE BANDS 1605 - 2850 KC/S AND 4000 - 23000 KC/S.

J-1

FREQUENCY IN KC/S	EMISSION	AUTHORIZED COMMUNICATIONS
1630 2340	6A3, 2.8A3J/H	GOVERNMENT COAST STATIONS
1650	-	NAVIGATIONAL, VANCOUVER HARBOUR
2054	-	GOVERNMENT COAST STATIONS (DAYTIME)
2142 2166	-	B.C. TELEPHONE CO.
2182	6A3, 2.8A3H	DISTRESS AND CALLING
2366 2638 2738	-	INTERSHIP
2708 2798 4123.6	2.8A3J	B.C. TELEPHONE CO.
4133.2	6A3, 2.8A3J/H	GOVERNMENT COAST STATIONS

FREQUENCIES SHOWN ARE CARRIER FREQUENCIES. FOR SINGLE SIDE-BAND EMISSION THE ASSIGNED FREQUENCY IS 1.4 KC/S HIGHER.

LINE # .....5....10....15....20....25....30....35....40....45....50....55....60....65....70....75....80

17 SHIP STATIONS ARE AUTHORIZED TO USE ANY FREQUENCIES AS  
18 DIRECTED BY FOREIGN COAST STATIONS FOR COMMUNICATION IN THE  
19 BANDS 1605 - 2850 KC/S AND 4000 - 23000 KC/S.

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FREQUENCY IN KC/S	EMISSION	AUTHORIZED COMMUNICATIONS
1630 2340	6A3, 2.8A3J/H	GOVERNMENT COAST STATIONS
1650	-	NAVIGATIONAL, VANCOUVER HARBOUR
2040 2638 2738	-	INTERSHIP
2054	-	GOVERNMENT COAST STATIONS (DAYTIME)
2166 2212	-	R.C. TELEPHONE CO.
2182	6A3, 2.8A3H	DISTRESS AND CALLING
2366	6A3, 2.8A3J/H	INTERSHIP (EMERGENCY COMMUNICATIONS ONLY)
2708 2798 4123.6	2.8A3J	B.C. TELEPHONE CO.
4133.2	6A3, 2.8A3J	GOVERNMENT COAST STATIONS

FREQUENCIES SHOWN ARE CARRIER FREQUENCIES. FOR SINGLE SIDE-BAND EMISSION THE ASSIGNED FREQUENCY IS 1.4 KC/S HIGHER.

SHIP STATIONS ARE AUTHORIZED TO USE ANY FREQUENCIES AS DIRECTED BY FOREIGN COAST STATIONS FOR COMMUNICATION IN THE BANDS 1605 - 2850 KC/S AND 4000 - 23000 KC/S.

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CHANNEL	SHIP TRANS.	FREQUENCY IN MC/S SHIP RECEIVE	EMISSION	AUTHORIZED COMMUNICATIONS
06	156.300	156.300	16F3	INTERSHIP
08	156.400	156.400	16F3	INTERSHIP
11	156.550	156.550	16F3	PORT OPERATIONS
12	156.600	156.600	16F3	PORT OPERATIONS
14	156.700	156.700	16F3	PORT OPERATIONS
16	156.800	156.800	16F3	SAFETY AND CALLING
23	157.150	161.750	16F3	R.C. TELEPHONE CO.
24	157.200	161.800	16F3	R.C. TELEPHONE CO.
25	157.250	161.850	16F3	R.C. TELEPHONE CO.
26	157.300	161.900	16F3	GOVERNMENT COAST STATIONS
27	157.350	161.950	16F3	B.C. TELEPHONE CO.
68	156.425	156.425	16F3	INTERSHIP, SHIP-SHORE
69	156.475	156.475	16F3	NON-COMMERCIAL
77	156.875	156.875	16F3	INTERSHIP NON-COMMERCIAL
				INTERSHIP-COMMERCIAL
				FISHING VESSELS

SHIP STATIONS ARE AUTHORIZED TO USE ANY FREQUENCIES AS DIRECTED BY FOREIGN COAST STATIONS FOR COMMUNICATION IN THE BAND 156.000 - 174.000 MC/S.

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FREQUENCY IN KC/S	EMISSION	AUTHORIZED COMMUNICATIONS
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5	2118	2142	2166	6A3.2.8A3J/H	GOVERNMENT COAST STATIONS
6	2182			6A3.2.8A3H	DISTRESS AND CALLING
7	2206	2815		6A3.2.8A3J/H	GOVERNMENT COAST STATIONS
8	4110.8	4123.6	4133.2	6A3.2.8A3J/H	GOVERNMENT COAST STATIONS
9	2003			6A3.2.8A3J/H	INTERSHIP, GREAT LAKES AND ST. LAWRENCE
10					RIVER WITHIN LIMITS OF INLAND WATERS ONLY.
11	2134			6A3.2.8A3J/H	INTERSHIP, FISHING VESSELS, MONTREAL
12					EASTWARD ONLY.
13	2237			6A3.2.8A3J/H	INTERSHIP, OTHER THAN FISHING VESSELS,
14					MONTREAL EASTWARD ONLY.
15	2638			6A3.2.8A3J/H	INTERSHIP
16	2738			6A3.2.8A3J/H	INTERSHIP, MONTREAL EASTWARD ONLY.

FREQUENCIES SHOWN ARE CARRIER FREQUENCIES. FOR SINGLE SIDEBAND EMISSION THE ASSIGNED FREQUENCY IS 1.4 KC/S HIGHER.

SHIP STATIONS ARE AUTHORIZED TO USE ANY FREQUENCIES AS DIRECTED BY FOREIGN COAST STATIONS FOR COMMUNICATION IN THE BANDS 1605-2850 AND 4000-23000 KC/S.

1	FREQUENCES EN KHZ			EMISSION	COMMUNICATIONS AUTORISEES
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3	2118	2142	2166	6A3. 2.8A3J/H	STATIONS COTIERES DU GOUVERNEMENT
4	2182			6A3. 2.8A3H	DETRESSE ET APPEL
5	2206	2815		6A3. 2.8A3J/H	STATIONS COTIERES DU GOUVERNEMENT
6	4110.8	4123.6	4133.2	6A3. 2.8A3J/H	STATIONS COTIERES DU GOUVERNEMENT
7	2003			6A3. 2.8A3J/H	NAVIRE-NAVIRE, GRANDS LACS DANS LES
8					LIMITES DES EAUX INTERIEURES SEULEMENT
9	2134			6A3. 2.8A3J/H	NAVIRE-NAVIRE, NAVIRES DE PECHE,
10					MONTREAL ET A L'EST SEULEMENT
11	2237			6A3. 2.8A3J/H	NAVIRE-NAVIRE, AUTRES QUE NAVIRES DE
12					PECHE, MONTREAL ET A L'EST SEULEMENT
13	2638			6A3. 2.8A3J/H	NAVIRE-NAVIRE
14	2738			6A3. 2.8A3J/H	NAVIRE-NAVIRE, MONTREAL ET A L'EST
15					SEULEMENT

LES FREQUENCES INDIQUEES SONT LES FREQUENCES PORTEUSES. DANS LE CAS DES EMISSIONS A BANDE LATERALE UNIQUE, LA FREQUENCE ASSIGNEE SE TROUVE A 1.4 KHZ AU-DESSUS DE LA PORTEUSE.

LES STATIONS DE NAVIRE PEUVENT UTILISER TOUTE FREQUENCE QUE LES STATIONS COTIERES ETRANGERES LEUR DEMANDENT D'UTILISER POUR LES COMMUNICATIONS DANS LES BANDES DE 1605 A 2850 ET DE 4000 A 23000 KHZ.

1	FREQUENCY IN MC/S			AUTHORIZED COMMUNICATIONS
2	CHANNEL	SHIP TRANS.	SHIP RECEIVE	
3				
4				
5	06	156.300	156.300	INTERSHIP
6	08	156.400	156.400	INTERSHIP
7	09	156.450	156.450	PORT OPERATIONS
8	10	156.500	156.500	PORT OPERATIONS
9	11	156.550	156.550	PORT OPERATIONS
10	12	156.600	156.600	PORT OPERATIONS
11	13	156.650	156.650	PORT OPERATIONS
12	14	156.700	156.700	PORT OPERATIONS

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13	16	156.800	156.800	SAFETY AND CALLING
14	24	157.200	161.800	GOVERNMENT COAST STATIONS
15	26	157.300	161.900	GOVERNMENT COAST STATIONS
16	27	157.350	161.950	GOVERNMENT COAST STATIONS
17	68	156.425	156.425	INTERSHIP NON-COMMERCIAL

IN ADDITION TO THE ABOVE FREQUENCIES, SHIP STATIONS ARE AUTHORIZED TO USE

ANY FREQUENCIES THEY ARE DIRECTED TO USE BY A FOREIGN COAST STATION FOR  
RADIOTELEPHONE COMMUNICATIONS IN THE BAND 156.000 - 174.000 MC/S.

P-2

1	2	FREQUENCE EN MHZ		
3	4	EM. NAVIRE	REC. NAVIRE	COMMUNICATIONS AUTORISEES
5	06	156.300	156.300	NAVIRE-NAVIRE
6	08	156.400	156.400	NAVIRE-NAVIRE
7	09	156.450	156.450	OPERATIONS PORTUAIRES
8	10	156.500	156.500	OPERATIONS PORTUAIRES
9	11	156.550	156.550	OPERATIONS PORTUAIRES
10	12	156.600	156.600	OPERATIONS PORTUAIRES
11	13	156.650	156.650	OPERATIONS PORTUAIRES
12	14	156.700	156.700	OPERATIONS PORTUAIRES
13	16	156.800	156.800	SECURITE ET APPEL
14	24	157.200	161.800	STATIONS COTIERES DU GOUVERNEMENT
15	26	157.300	161.900	STATIONS COTIERES DU GOUVERNEMENT
16	27	157.350	161.950	STATIONS COTIERES DU GOUVERNEMENT
17	68	156.425	156.425	NAVIRE-NAVIRE NON-COMMERCIAL

EN PLUS DES FREQUENCES SUSMENTIONNEES, LES STATIONS DE NAVIRE  
PEUVENT UTILISER TOUTE FREQUENCE QUE LES STATIONS COTIERES  
ETRANGERES LEUR DEMANDENT D'UTILISER POUR LES COMMUNICATIONS  
RADIOTELEPHONIQUES DANS LA BANDE DE 156.000 A 174.000 MHZ.

T-1

Co Code  
52-1847  
3624  
13121

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
	118-136	MHZ		6A3															
	121.5/243	MHZ		6A3/2A2															
	3025	(3023.5)	KHZ	3A3H															
	5681.5	(5680)	KHZ	3A3H															
	4611.5	(4610)	KHZ	3A3J															
	8071.5	(8070)	KHZ	3A3J															
	4881.5	(4880)	KHZ	3A3J															
	9173.5	(9172)	KHZ	3A3J															
	4536.5	(4535)	KHZ	3A3J															
	5541.5	(5540)	KHZ	3A3J															
	4474	(4472.5)	KHZ	3A3J															
	4983.5	(4982)	KHZ	3A3J															
	2311.5	(2310)	KHZ	3A3J															
	4051.5	(4050)	KHZ	3A3J															
	5665.5	(5664)	KHZ	3A3J															
	2904.5	(2903)	KHZ	3A3J															
	4676.5	(4675)	KHZ	3A3J															
	4676.5	(4675)	KHZ	3A3J															

CANADIAN VHF AERONAUTICAL FREQUENCY PLAN  
SURVIVAL CRAFT  
ATC - RANGE STNS.  
A-G EMERGENCY CHANNEL  
INCO STNS.  
INCO STNS.  
ONTARIO DEPT. LANDS & FORESTS  
ONTARIO DEPT. LANDS & FORESTS  
ONTARIO DEPT. LANDS & FORESTS  
ONTARIO DEPT. LANDS & FORESTS  
DEPT. ENERGY MINES & RESOURCES  
DEPT. ENERGY MINES & RESOURCES  
DEPT. ENERGY MINES & RESOURCES  
FECTEAU AIR TRANSPORT  
FECTEAU AIR TRANSPORT  
BRADLEY AIR SERVICES  
BRADLEY AIR SERVICES  
AUSTIN AIRWAYS



LINE # .....5...10...15...20...25...30...35...40...45...50...55...60...65...70...75...80

21	11384.5	(11383)	KHZ	3A3J	BRADLEY AIR SERVICES
22	4946.5	(4945)	KHZ	3A3J	AUSTIN AIRWAYS
23	-----				
24					
25	5283	(5281.5)	KHZ	3A3J	PANARTIC OIL
26	5366.5	(5365)	KHZ	3A3J	ATLAS AVIATION
27	2848.5	(2847)	KHZ	3A3J	UMEX STNS.
28	5076.5	(5075)	KHZ	3A3J	ANACONDA MINES LTD.
29	5646.5	(5645)	KHZ	3A3J	LAURENTIAN AIR SERVICES
30	4851.5	(4850)	KHZ	3A3J	SUPERIOR AIRWAYS LTD.
31	5149	(5147.5)	KHZ	3A3J	IRON OPE CO. STNS.
32	4357.5	(4356)	KHZ	3A3J	BAFFINLAND IRON MINES
33	4733	(4731.5)	KHZ	3A3J	USAF - THULE
34	3167.5	(3166)	KHZ	3A3J	BELL TEL. CGD206
35	5391.5	(5390)	KHZ	3A3J	BELL TEL. CGD206
36	7419.5	(7418)	KHZ	3A3J	BELL TEL. CGD206
37	10750.5	(10749)	KHZ	3A3J	BELL TEL. CGD206
38	3299.5	(3298)	KHZ	3A3J	BELL TEL. CGE86
39	4630.5	(4629)	KHZ	3A3J	BELL TEL. CGE86
40	5129.5	(5128)	KHZ	3A3J	BELL TEL. CGE86
41	6782.5	(6781)	KHZ	3A3J	BELL TEL. CGE86
42	7624.5	(7623)	KHZ	3A3J	BELL TEL. CGE86
43	10856.5	(10855)	KHZ	3A3J	BELL TEL. CGE86
44	2805.5	(2804)	KHZ	3A3J	BELL TEL. CGE80
45	-----				
46					
47	5111.5	(5110)	KHZ	3A3J	BELL TEL. CGE80
48	4879.5	(4878)	KHZ	3A3J	BELL TEL. CGE80
49	5791.5	(5790)	KHZ	3A3J	BELL TEL. CGE80
50	2543.5	(2542)	KHZ	3A3J	NORTH TEL. CFX94
51	4468.5	(4467)	KHZ	3A3J	NORTH TEL. CFX94
52	2805.5	(2804)	KHZ	3A3J	MANITOBA TEL. CFY523
53	4866.5	(4865)	KHZ	3A3J	MANITOBA TEL. CFY523
54	5895.5	(5894)	KHZ	3A3J	MANITOBA TEL. CFY523
55	6821.5	(6820)	KHZ	3A3J	MANITOBA TEL. CFY523
56	7636.5	(7635)	KHZ	3A3J	MANITOBA TEL. CFY523
57					
58	CARRIER FREQUENCIES IN BRACKETS.				

DEPARTMENT OF COMMUNICATIONS  
TELECOMMUNICATIONS REGULATION



MINISTÈRE DES COMMUNICATIONS  
RÈGLEMENTATION  
DES TÉLÉCOMMUNICATIONS

**RADIO INSPECTION  
REPORT**

**RAPPORT D'INSPECTION  
RADIO**

LICENSEE/APPLICANT — *Titulaire/Demandeur*

STATION NAME — *Nom de station*

CALL SIGN  
*Indicatif d'appel*

LOCATION — *Emplacement*

☐ AIRCRAFT  
*Aéronef*

☐ COAST OR LAND  
*Côtière ou terrestre*

☐ AMATEUR

☐ MOBILE

☐ SHIP (VOLUNTARILY)  
*Navire (volontairement)*

☐ OTHERS  
*Autre*

DISCREPANCIES (SEE REVERSE SIDE) — *Défauts (voir verso)*

1. ☐ 2. ☐ 3. ☐ 4. ☐ 5. ☐ 6. ☐ 7. ☐ 8. ☐ 9. ☐ 10. ☐ 11. ☐ 12. ☐

REMARKS — *Remarques*

The station identified herein has been inspected and found to comply with applicable regulations at the time of the inspection except as noted above.

*La station mentionnée dans le présent rapport a été inspectée et était conforme aux règlements en vigueur au moment de l'inspection, sauf en ce qui a trait aux défauts mentionnés ci-dessus.*

INSPECTED — *Inspection*  
Date

INSPECTOR — *Inspecteur*  
Signature

16-308 871

**DISCREPANCY CODE**

1. Off frequency operation.
2. Overmodulation/excessive FM deviation.
3. Power in excess of authorization (including increase in ERP caused from transmission line or antenna changes).
4. Unauthorized installation (including additions/modifications where approval required).
5. Change of location without authorization.
6. Spurious radiation.
7. Incorrect operating procedure/identification, superfluous signals, unauthorized use, etc.
8. Inadequate type-approval or model number identification plates.
9. Unsafe installation of transmitting equipment, including antenna structures and antennae.
10. Antenna structures not in accordance with authorization — e.g., height, markings, etc.
11. Station not equipped as required under the radio regulations — e.g., documents, overmodulation indicator, frequency meter, etc.
12. Operating personnel inadequately certified.

**CODE DES DÉFAUTS**

1. *Exploitation sur une fréquence autre que la fréquence assignée.*
2. *Surmodulation ou déviation FM excessive.*
3. *Puissance excédant la valeur autorisée (y compris l'augmentation de la puissance apparente rayonnée causée par des modifications de la ligne de transmission ou de l'antenne).*
4. *Installation non autorisée (y compris les additions ou modifications dont l'approbation est exigée).*
5. *Changement d'emplacement sans autorisation.*
6. *Rayonnement non essentiel.*
7. *Méthode d'exploitation incorrecte: identification, signaux superflus, emploi non autorisé, etc.*
8. *Plaques de numéro d'homologation ou de modèle, insuffisantes.*
9. *Installation peu sûre du matériel d'émission, y compris les bâtis d'antenne et les antennes.*
10. *Bâtis d'antenne non conformes à l'autorisation pour ce qui est, par exemple, de la hauteur, du balisage, etc.*
11. *La station n'est pas équipée conformément aux prescriptions des règlements sur la radio relatives, par exemple, aux documents, à l'indicateur de surmodulation, au fréquencemètre, etc.*
12. *Défauts relatifs aux certificats du personnel d'exploitation.*

## CLASS OF STATION

AL	Aeronautical radionavigation land station
AM	Aeronautical radionavigation mobile station
AT	Amateur station
AX	Aeronautical fixed station
BC	Broadcasting station, sound
BT	Broadcasting station, television
EA	Space station in the amateur-satellite service
EB	Space station in the broadcasting-satellite service (sound broadcasting)
EC	Space station in the fixed-satellite service
ED	Space telecommand space station
EH	Space research space station
EK	Space tracking space station
EM	Meteorological-satellite space station
EN	Radionavigation-satellite space station
ER	Space telemetering space station
EV	Space station in the broadcasting-satellite service (television)
EX	Experimental station
FA	Aeronautical station
FB	Base station
FC	Coast station
FL	Land station
FP	Port station
FR	Receiving station only, connected with the general network of telecommunication channels
FS	Land station established solely for the safety of life
FX	Fixed station
LR	Radiolocation land station
MA	Aircraft station
ME	Space station
ML	Land mobile station
MO	Mobile station
MR	Radiolocation mobile station
MS	Ship station
NL	Maritime radionavigation land station
OD	Oceanographic data station
OE	Oceanographic data interrogating station



RA	Radio astronomy station
RC	Non-directional radiobeacon
RD	Directional radiobeacon
RG	Radio direction-finding station
RM	Maritime radionavigation mobile station
RT	Revolving radiobeacon
SM	Meteorological aids station
SS	Standard frequency station
TA	Space operation earth station in the amateur-satellite service
TC	Earth station in the fixed-satellite service
TD	Space telecommand earth station
TE	Transmitting earth station
TF	Fixed earth station in the radiodetermination-satellite service
TH	Earth station in the space research service
TK	Space tracking earth station
TL	Mobile earth station in the radiodetermination-satellite service
TM	Earth station in the meteorological-satellite service
TN	Earth station in the radionavigation-satellite service
TP	Receiving earth station
TR	Space telemetering earth station
TS	Television, sound channel
TT	Earth station in the space operation service
TV	Television, vision channel

## NATURE OF SERVICE

CO	Station open to official correspondence exclusively
CP	Station open to public correspondence
CR	Station open to limited public correspondence
CV	Station open exclusively to correspondence of a private agency
OT	Station open exclusively to operational traffic of the service concerned

## EQUIPMENT FUNCTIONS

Equipment Functions (In accordance with Table 3 of the Preface to the International Frequency List):

---

- 014 = Meteorological
- 019 = Surface Control
  
- 020 = Marker Beacon
- 021 = Primary Flight Control
- 024 = Area Control
- 025 = Aerodrome Control
- 026 = Approach Control
  
- 033 = Lighthouse
- 034 = Loran
- 035 = Inter-ship
  
- 041 = Primary Use Inter-ship; Secondary use Ship-to- Shore
- 045 = River Service
- 046 = Emergency
- 047 = Police
- 048 = Stand by Circuit
- 049 = Time Signals
  
- 058 = Calibration of Direction Finders
  
- 065 = Search and Rescue (SAR)
- 066 = Broadcast or Television Relay
- 067 = Decca
- 068 = Press
- 069 = Railways
  
- 073 = For Testing Purposes
- 078 = Harbour Area
  
- 088 = Synchronized Network
  
- 090 = Customs
- 092 = Programme Transmission Service
- 094 = Guard and Call Frequency
- 097 = Broadcast of NOTAMS
  
- 101 = Consol
- 107 = Coast Guard
- 108 = Lifeboats
- 110 = Passive Reflector
  
- 114 = Oil Drilling Rig (s)
  
- 116 = International exchange of Police Information

## EQUIPMENT FUNCTIONS

117 = Geophysical Research  
 122 = National Defence  
 123 = Embassy of Foreign Country  
 124 = Fire  
 126 = Surveillance Radar  
 127 = Precision Approach Radar  
 128 = Notices to Mariners  
 129 = Geodetic Survey Operations  
  
 130 = Broadcast, Television or Remote Pick Up  
 134 = Omnidirectional Radio Range (VOR, TVOR)  
 135 = Main Beacon (SBA)  
 136 = Localizer (ILS)  
 137 = Glide Path (ILS)  
 138 = Distance Measuring (DME)  
 139 = Ground Controlled Approach (GCA)  
  
 140 = Radar Astronomy  
 141 = Research Spacecraft  
 142 = Deep Space Probe  
 143 = Radiosonde  
 144 = Control Circuit  
 145 = Relay  
 147 = Radar  
 148 = Telemetry  
  
 151 = Eureka Beacon  
 152 = BABS Beacon  
 153 = Repeater  
 154 = Remote Control  
  
 161 = Highway Control  
 162 = Scientific Work

Function Code	Brief Description	Service Volume	
		Range (NM)	Height (Ft)
210 = Ground Control Intercept	(A)	200	60.000
	(B)	250	60.000
211 = Sector/Area Control	(A)	200	60.000
	(B)	250	60.000
212 = Movement Control		200	50.000
213 = Airborne Relay	(A)	150	70.000
	(B)	250	70.000
214 = Teledisplay		300	70.000

## EQUIPMENT FUNCTIONS

219 = Link between a Studio and its Corresponding Broadcasting  
Transmitter (STL)

230 = Ionospheric Height Measurements

235 = Ionospheric Scattering Observation

262 = Transmission of Alarm Signals

Function Code	Brief Description	Service Volume	
		Range (NM)	Height (Ft)
300 = Flying Training (A)		150	30.000
	(B)	200	45.000
301 = Communications Training		-	-
302 = Radar Bomb Scoring (A)		50	1.000
	(B)	200	60.000
303 = Weapon Training Ranges (A)		30	6.000
	(B)	50	60.000
304 = Testing		-	-
305 = Calibration		-	-
306 = ECM Training		-	-
307 = Pilotless Aircraft		100	50.000
309 = Television		-	-
310 = Terrestrial Telemetry		-	-
400 = Eureka Beacon		(150)	(50.000)
401 = Voice Rotating Beacon		-	-
402 = YE/YG Beacon		-	-
406 = Tacan Beacon High Cover		200	60.000
407 = Tacan Beacon Low Cover		100	10.000
408 = Tacan Approach Beacon		40	25.000
409 = VORTAC		-	-
411 = VDF/UDF - Aerodrome Service		50	30.000
412 = VDF/UDF - Aera Service		200	50.000
500 = Search and Rescue			

## EQUIPMENT FUNCTIONS

Function Code	Brief Description	Service Volume	
		Range (NM)	Height (Ft)
700 =	Telecommand, Telemetry and Tracking	-	-
701 =	Research	-	-
702 =	Communications Satellites	-	-
703 =	Radionavigation Satellites	-	-
704 =	Meteorological Satellites	-	-
800 =	Close Air Support (High Level)	150	20.000
801 =	Close Air Support (Low Level)	25	10.000
810 =	Multi-Channel Radio Relay	-	-
811 =	Single Channel Radio Relay	-	-
813 =	Stand-by to Primary System	-	-

Geographical Place Name CodingCoding Rules

1. Follow rules in proper sequence.
2. Omit accent marks, and punctuation marks which are part of a name.
3. Use figures wherever possible.
4. Multiple words omit spaces only if cannot be accommodated in eight or less spaces.

E.G. SUN LAKE for SUN LAKE but SUNKROCK for SUNK ROCK. (space from the right)

5. Apply "Standard Abbreviations" in names of two or more words.
6. Eliminate vowels from right to left. (A, E, I, O, U)

Do not eliminate a vowel if it is first letter of a word.

Do not eliminate a vowel if it is part of the "standard abbreviations",  
(eliminate vowels only to point required to reduce a name to eight characters)

E.G. TRAFALGR for TRAFALGAR

7. Eliminate one of any double letters starting at right.

Do not eliminate any part of a "standard abbreviation"

8. Eliminate letters as follows:

N from NG  
H from TH  
C from CK  
L from LD  
T from ST  
H from CH

Do not eliminate any part of a "standard abbreviation".

Do not eliminate first letter following a "standard abbreviation".

E.G. CHRSCHRC for CHRISTCHURCH

9. Eliminate letter R starting from the right.

Do not eliminate any part of a "standard abbreviation"

Do not eliminate the first letter following a "standard abbreviation"

E.G. HTCNSNBG for HUTCHINSONBURG.

10. Eliminate from the right all characters over eight.

E.G. INTNTNLF for INTERNATIONAL FALLS.

STANDARD ABBREVIATIONS

B	Baie, Bay	EXC	Excepted
BCH	Beach	EXTR	This symbol means "External" and indicates that the reception area is outside the country.
BK	Bank		
BO	Boundary	FLD	Field
BRDG	Bridge	FLS	Falls
BT	Butte	FT	Fort
C	Cap, Cape	FTR	Fire Tower
CHR	Church	GR	Grand, Grande
CK	Creek	GRAL	General
CL	Central	GRD	Guard
CLLG	College	GS	Generating Station
CNT	Center or Centre	GT	Great
CO	Country	HD	Head
CP	Camp	HLL	Hill
CR	Compressor Station	HPTL	Hospital
CRY	Cannery	HR	Harbour
CS	Capacitor Station	HTS	Heights
CTG	Cottage	HVN	Haven
CY	City	HWAY	Highway
DEP	Depot	I	Ile, Island, Isle (and Plural)
DM	Dam		
DPT	Department	INTR	This symbol means "Interior" and indicates that the reception area covers all the territory of the country.
E	East, Est, Eastern		
ET	Estate		

IS	Islands	NMON	National Monument
JN	Junction	NO	Nord, North, Northern
* L	Lac, Lake (and Plural)	NPK	National Park
LCL	This symbol means "Local" and replaces indications such as "the vicinity of" or "area of". The trans- mitting station: it has also been used where the same location has been given for reception as for transmission.	NRF	National Refuge
LD	Land	NTL	National
LDG	Landing	OCN STN V	Ocean Station Vessel
LFB	Lifeboat	PK	Peak
LG	Lagoon	PMPSTN	Pump Station
LH	Lighthouse	PNT	Point, Pointe
LKT	Lookout	PR	Prince
LNG	Lodging	PRJ	Project
LR	Lower	PRK	Park
LSH	Lightship	PPK	Provincial Park
LSTN	Lightstation	PRS	Princess, Princesse
MON	Monument	PS	Pass
* MT	Mont, Monte, Mount (and Plural)	PT	Port
* MTN	Mountain	PWR	Power
* MTNS	Mountains	R	This symbol means that the entry concerns a reception frequency.
MUN	Municipality	RA	This symbol means that the entry concerns a frequency used for reception by a radio astronomy station.
N	New, Nouveau, Nouvelle, Nova	RCH	Ranch
* Use abbreviations in code only and not in decode		RCK	Rock
		RD	Road
		RDS	Roads
		RG	Range

In all other cases use codes, only  
when necessary - to fall with 25 spaces.



RGR	Ranger	VLG	Village
RPS	Rapids	VLV	Valley
RPTR	Repeater	W	West, Ouest, Western
RSV	Reserve, Reservation	WSH	Weather Ship
* RV	River, Riviere	WX	Weather
RVSD	Riverside	ZN	This symbol means "Network"
S	Saint, Sainte		
SD	Sound		
SH	Ship, Navire		
SHL	Shoal		
SHLS	Shoals		
SO	Sud, South, Southern		
SPR	Springs		
SQ	Square		
SS	Sub Station		
STN	Station		
STRM	Stream		
T	Terminal		
TG	Thermal Generator		
TP	Township		
TR	Tower		
TRP	Trap		
TS	Transformer Station		
UP	Upper		
V	Ville		

\* Use abbreviation for "Riviere" only in the code.

In all other cases use codes, only when necessary to fall with 25 spaces.

ABBREVIATIONS FOR UNUSUAL WORD COMBINATIONS

ALS	ALASKA
ALSHY	ALASKAHIGHWAY
ALSHY	ALASKAHIGHWAYMILE
ALSHY20	ALASKAHIGHWAYMILE20
ALSHY240	ALASKAHIGHWAYMILE240
ALEXNDRA	ALEXANDRIA
ALEXANDR	ALEXANDER
PACFCCST	WEST COAST
PACFCCST	BC COAST (OR VARIATIONS)
ATLNTCST	EAST COAST (OR VARIATIONS)

## COUNTRY SYMBOLS

Meanings of the symbols used in Columns 4b and 5a of the International Frequency List

N.B.: The country symbols have a geographical significance only

Symbol	Name of the country	Symbol	Name of the country
AAA	Shared throughout the world	CLM	Republic of Colombia
AAB	Shared by several countries, but in a restricted area of the world	CLN	Sri Lanka (Ceylon) (Republic of)
ADL	Adelie Land	CME	United Republic of Cameroon
AFG	Afghanistan	CNR	Canaries
AFI	French Territory of the Afars and Issas	COG	People's Republic of the Congo
AFS	Republic of South Africa <sup>1</sup>	COM	Comoro Islands
AGL	Angola	CPV	Cape Verde Islands
ALB	People's Republic of Albania	CTI	Republic of the Ivory Coast
ALG	Algeria (Algerian Democratic and Popular Republic)	CTR	Costa Rica
ALS	State of Alaska, United States of America	CUB	Cuba
AMS	New Amsterdam Island	CVA	Vatican City State
AND	Andorra	CYP	Republic of Cyprus
AOE	Spanish Province in West Africa	D	Germany (Federal Republic of)
ARG	Argentine Republic	DAH	Republic of Dahomey
ARS	Kingdom of Saudi Arabia	DDR	German Democratic Republic
ASC	Ascension	DNK	Denmark
ASO	South-West Africa	DOM	Dominican Republic
ATN	Netherlands Antilles	E	Spain
AUS	Commonwealth of Australia	ECA	
AUT	Austria	ECB	
AZR	Azores	ECC	
B	Brazil	ECD	
BAH	Bahamas	ECE	Communication-satellite space station(s) for use by the Administration or Administrations whose names appear in Column 12b
BCH	Republic of Botswana	ECF	
BDI	Republic of Burundi	ECG	
BEL	Belgium	ECH	
BER	Bermuda	ECI	
BIO	British Indian Ocean Territory	ECJ	
BLR	Biclorussian Soviet Socialist Republic	ECK	
BOL	Bolivia	ECL	
BRB	Barbados	EGY	Egypt (Arab Republic of)
BRM	Union of Burma	EHA	
BRU	Brunei	EHB	
BUL	People's Republic of Bulgaria	EHC	
CAF	Central African Republic	EHD	
CAN	Canada	EHE	
CAR	Caroline Islands	EHF	
CBG	Khmer Republic	EHG	
CGO	Zaire (Republic of)	EHH	
CHL	Chile (except Easter Island)	EHJ	Space research space station(s) for use by the Administration of Administrations whose names appear in Column 12b
CHN	China (People's Republic of)	EHK	
CHR	Christmas Island (Indian Ocean)	EHL	
CKH	Cook Islands	EHM	
CKN	Cook Islands (Northern Group)	EHN	
		EHO	
		EHP	
		EHQ	
		EHR	
		EHS	
		EHT	

<sup>1</sup> See I.T.U. Administrative Council Resolution No. 619 (22nd Session, 1967)

<sup>2</sup> New symbols to replace D and GLP are under consideration

Symbol	Name of the country	Symbol	Name of the country
EMA	Meteorological-satellite space station(s) for use by the Administration or Administrations whose names appear in Column 12b	IOB	British West Indies
EMB		IRL	Ireland
EMC		IRN	Iran
ENA		IRQ	Republic of Iraq
	Radionavigation-satellite space station(s) for use by the Administration or Administrations whose names appear in Column 12b	ISL	Iceland
EQA		ISR	State of Israel
ETH		IWA	Iwo Jima
		J	Japan
F	France	JAR	Jarvis Island
FJI	Fiji Islands	JMC	Jamaica
FLK	Falkland Islands and Dependencies <sup>3</sup>	JON	Johnston Island
FNL	Finland	JOR	Hashemite Kingdom of Jordan
G	United Kingdom of Great Britain and Northern Ireland, the Channel Islands and the Isle of Man	KEN	Kenya
GAB	Gabon Republic	KER	Kerguelen Islands
GCA	Territories and Colonies of the United Kingdom in Region 1	KOR	Republic of Korea
GCB	Territories and Colonies of the United Kingdom in Region 2	KRE	Democratic People's Republic of Korea
GCC	Territories and Colonies of the United Kingdom in Region 3	KWT	State of Kuwait
GDL	French Department of Guadeloupe	LAO	Kingdom of Laos
GHA	Ghana	LBN	Lebanon
GIB	Gibraltar	LBR	Republic of Liberia
GIL	Gilbert and Ellice Islands	LBY	Libyan Arab Republic
GLP <sup>2</sup>	Persian Gulf	LSO	Kingdom of Lesotho
GMB	Gambia (Bathurst)	LUX	Luxembourg
GNE	Republic of Equatorial Guinea	MAC	Macao
GNP	Portuguese Guinea	MAU	Mauritius
GRC	Greece	MCO	Monaco
GRL	Greenland	MCS	Marcus Island
GTM	Guatemala	MDG	Malagasy Republic
GUB	Guyana	MDR	Madeira
GUF	French Department of Guiana	MDW	Midway Islands
GUI	Republic of Guinea	MEX	Mexico
GUM	Guam	MLA	Malaysia
		MLD	Republic of Maldives
HKG	Hongkong	MLI	Republic of Mali
HNB	British Honduras	MLT	Malta
HND	Republic of Honduras	MNG	Mongolian People's Republic
HNG	Hungarian People's Republic	MOZ	Mozambique
HOL	Kingdom of the Netherlands	MRA	Mariana Islands
HTI	Republic of Haiti	MRC	Kingdom of Morocco
HVO	Republic of Upper Volta	MRL	Marshall Islands
HWA	State of Hawaii, United States of America	MRN	Marion Island
HWL	Howland Island	MRT	French Department of Martinique
		MTN	Islamic Republic of Mauritania
I	Italy	MWI	Malawi
ICO	Cocos Keeling Islands	NCG	Nicaragua
IND	Republic of India	NCL	New Caledonia and Dependencies
INP	Portuguese India	NGR	Republic of the Niger
INS	Republic of Indonesia	NGU	Territory of New Guinea
		NHB	New Hebrides (British-French Condominium)
		NIG	Federal Republic of Nigeria
		NIU	Niue Island
		NOR	Norway
		NPL	Nepal
		NRU	Nauru Island
		NZL	New Zealand
		OCE	French Polynesia
		ONC	Stations of the "United Nations Military Observer Group in India and Pakistan"

<sup>2</sup> New symbols to replace D and GLP are under consideration

<sup>3</sup> As regards jurisdiction over the Falkland (Malvinas) Islands and certain other territories, see the statement by the Argentine Republic (paragraph V of the Final Protocol to the International Telecommunication Convention, Montreux, 1965) and that by the United Kingdom of Great Britain and Northern Ireland (paragraph L of that Protocol)

Symbol	Name of the country	Symbol	Name of the country
ONJ	Stations of the "United Nations Truce Supervision Organization in areas between the Armistice Demarcation Lines at Jerusalem"	STP	S. Thome and Principe
PAK	Pakistan	SUI	Confederation of Switzerland
PAP	Territory of Papua	SUR	Surinam
PAQ	Easter Island, Chile	SWN	Swan Island
PHL	Republic of the Philippines	SWZ	Kingdom of Swaziland
PHX	Phoenix Islands	SYR	Syrian Arab Republic
PLM	Palmyra Island	TCD	Republic of the Chad
PNR	Panama	TCH	Czechoslovak Socialist Republic
PNZ	Panama Canal Zone	TGK	United Republic of Tanzania (Tanganyika)
POL	People's Republic of Poland	TGO	Togolese Republic
POR	Portugal	THA	Thailand
PRG	Paraguay	TKL	Tokelau Islands
PRU	Peru	TMP	Portuguese Timor
PTC	Pitcairn Island	TON	Tonga (Kingdom of)
PTR	Puerto Rico	TRC	Tristan da Cunha (Station of the Republic of South Africa)
REU	French Department of Reunion	TRD	Trinidad and Tobago
RHS	Rhodesia <sup>4</sup>	TUN	Tunisia
ROD	Rodriguez	TUR	Turkey
ROU	Socialist Republic of Roumania	UGA	Uganda
RRW	Republic of Rwanda	UKR	Ukrainian Soviet Socialist Republic
RYU	Ryu Kyu Islands	URG	Oriental Republic of Uruguay
S	Sweden	URS	Union of Soviet Socialist Republics
SDN	Democratic Republic of the Sudan	USA	The 48 contiguous States of the United States of America (excludes the States of Alaska and Hawaii)
SEN	Republic of the Senegal	VEN	Republic of Venezuela
SEY	Seychelles	VIR	Virgin Islands
SHN	S. Helena	VTN	Republic of Viet-Nam
SLM	Solomon Islands	WAK	Wake Island
SLV	Republic of El Salvador	WAL	Wallis and Futuna Islands
SMA	American Samoa	YEM	Yemen Arab Republic
SMO	Western Samoa	YMS	Yemen (People's Democratic Republic of)
SMR	Republic of San Marino	YUG	Socialist Federal Republic of Yugoslavia
SNG	Republic of Singapore	ZAN	United Republic of Tanzania (Zanzibar)
SOM	Somali Democratic Republic	ZMB	Republic of Zambia
SPM	S. Pierre and Miquelon		
SRL	Sierra Leone		

<sup>4</sup> See Resolution No. 676, I.T.U. Administrative Council, 25th Session, 1970

COMITÉ INTERNATIONAL  
D'ENREGISTREMENT DES FRÉQUENCES  
I.F.R.B.



JUNTA INTERNACIONAL  
DE REGISTRO DE FRECUENCIAS  
I.F.R.B.

INTERNATIONAL  
FREQUENCY REGISTRATION BOARD  
I.F.R.B.

Référence à rappeler dans la réponse :  
When replying, please quote :  
Indiquee en la respuesta esta referencia :

I.F.R.B. Circular-letter  
No 323

Ø 34 70 00 - 34 80 00  
# Burinterna. Genève  
Tx 23000

GENÈVE,  
PLACE DES NATIONS

30 April 1975

Subject: Classification and designation of emissions.

References: Recommendation No. 8 of the Administrative Radio Conference, Geneva, 1959;  
I.F.R.B. Circular-letter No. 43 of 18 July 1962;  
I.F.R.B. Circular-letter No. 183 of 15 December 1967;  
I.F.R.B. Circular-letter No. 241 of 25 May 1970 (paragraph 14.8 thereof);  
I.F.R.B. Circular-letter No. 275 of 3 July 1972;  
Decision 1 and Opinion 44 of the XIIIth Plenary Assembly of the C.C.I.R., Geneva, 1974.

To the Director General

Dear Sir,

On behalf of the International Frequency Registration Board,  
I wish to draw your attention to the following:

1. The Administrative Radio Conference, Geneva, 1959, considering that the method of classification and designation of emissions defined in Article 2 of the Radio Regulations was not suitable for specifying completely and accurately all the characteristics of emissions, adopted Recommendation No. 8, in which it is recommended that the C.C.I.R., in collaboration with the I.F.R.B., should examine all emissions and characteristics requiring classification and develop a method of classifying and designating emissions which can be used over a long period and enable all essential information to be provided. The Conference also asked the C.C.I.R. to make a Recommendation in time for a decision to be taken at a future Administrative Radio Conference.

2. The XIth Plenary Assembly of the C.C.I.R., Oslo, 1966, accordingly adopted Recommendation 432 proposing a new method of classification and designation of emissions and also decided to establish an International Working Party I/1 for the purpose of keeping Recommendation 432 under constant review.

3. Following the considering part of Recommendation 432, the I.F.R.B. in its Circular-letter No. 183 of 15 December 1967 informed all Administrations of the contents of that Recommendation and requested them to apply, on a trial basis, the method of designation of emissions proposed in the said Recommendation, in parallel with the method defined in Article 2 of the Radio Regulations and Appendix 5 thereto, for entries in Column 7 of their frequency assignment notices to the I.F.R.B.

4. As a result of the application of Recommendation 432, on a trial basis, certain experience was gained and some modifications were considered necessary to this Recommendation. These modifications were approved by the XIIth Plenary Assembly of the C.C.I.R., New Delhi, 1970, and the revised Recommendation 432 resulted in Recommendation 432-1.

5. As a part of reorganization of the C.C.I.R., the International Working Party I/1 was renamed Interim Working Party 1/1. This Interim Working Party further reviewed Recommendation 432-1, as a result of the comments received from the Administrations in response to I.F.R.B. Circular-letter No. 275 of 3 July 1972, and suggested a revised method of classification and designation of emissions. This revised method was presented to the XIIIth Plenary Assembly of the C.C.I.R., Geneva, 1974, in document No. 1/1039.

6. The XIIIth Plenary Assembly of the C.C.I.R. decided:

- to cancel Recommendation 432-1;
- to annex to Opinion 44 the revised method proposed in document No. 1/1039 (see Appendix 1 to the present Circular-letter);
- to ask the Interim Working Party 1/1 to continue to function (Decision 1.) (see Appendix 2 to the present Circular-letter).

7. The Board would like to draw the particular attention of Administrations to paragraph 1 of Opinion 44 which asks Administrations to "take steps to conduct trials of the method of classifying and designating their emissions as described in the Annex (to the Opinion) with the ultimate object of enabling the next appropriate Administrative Radio Conference to consider the method for inclusion in the Radio Regulations".



8. It is pointed out in this connection that the Plenipotentiary Conference of the International Telecommunication Union, Malaga-Torremolinos, 1973, decided in its Resolution No. 28 to convene a World Administrative Radio Conference for the general revision of the Radio Regulations and the Additional Radio Regulations in 1979 and asked the Administrative Council to make the necessary preparations.

9. In view of paragraphs 7 and 8 above, it appears to the Board that if Administrations desire to modify the method defined in Article 2 of the Radio Regulations for the classification and designation of emissions, it would be necessary to pursue the study of the method described in the Annex to Opinion 44 of the C.C.I.R. and to come to some definite conclusions at the next Plenary Assembly of the C.C.I.R. as to the method to be recommended to replace that defined at present in Article 2 of the Radio Regulations.

10. In view of the following Conference scheduled for 1979, the Board believes that it would be opportune at this time to draw the attention of Administrations to Opinion 44 and Decision 1 of the XIIIth Plenary Assembly of the C.C.I.R. and to ask them to conduct trials mentioned in paragraph 1 of Opinion 44 and to send their comments to the Director of the C.C.I.R. as soon as possible and in any case before the end of April 1976 so that Interim Working Party 1/1 could take them into account and present the results of its study to the interim meeting of C.C.I.R. Study Group 1 in May-June 1976. This would enable the Interim Working Party 1/1 to use the period between the interim meeting and the final meeting of Study Group 1 to finalize a method which could then be presented to the XIVth Plenary Assembly of the C.C.I.R.

Yours faithfully,



A. Berrada  
Chairman

Annexes: Appendices 1 and 2



Appendix 1

To I.F.R.B. Circular-letter No.

OPINION 44

CLASSIFICATION AND DESIGNATION OF EMISSIONS

(1974)

The C.C.I.R.,

CONSIDERING

- (a) that the Recommendation No. 8 of the Administrative Radio Conference, Geneva, 1959, calls for action by the C.C.I.R. on the classification and designation of emissions;
- (b) that the application of the proposed method of designating emissions has been studied, and some experience has been gained in a trial of the proposed method;
- (c) that this experience has prompted Administrations and the I.F.R.B. to formulate proposals to improve that method;

IS UNANIMOUSLY OF THE OPINION

- 1. that Administrations should take steps to conduct trials of the method of classifying and designating their emissions as described in the Annex with the ultimate object of enabling the next appropriate Administrative Radio Conference to consider the method for inclusion in the Radio Regulations;
- 2. that Administrations should send comments resulting from their studies and trials of the method described in the Annex, including proposals for designation of new classes of emission, to the Director, C.C.I.R.

ANNEXPART 1Method for the Designation of Emissions\*)

1. Emissions are designated according to their necessary bandwidth and their classification.

## Section I

## NECESSARY BANDWIDTH

2. Whenever the full designation of an emission is necessary, the symbol for that emission, as given below, shall be preceded by three numerical digits as follows:

The first two digits are the first two significant figures of the necessary bandwidth expressed in hertz, the third is the power of 10 by which the first two figures must be

multiplied to produce the necessary bandwidth expressed in hertz. For example, necessary bandwidths of 25 Hz, 400 Hz, 2.4 kHz, 36 kHz, 180 kHz, 6.25 MHz, 200 MHz and 5.6 GHz, are expressed by the respective bandwidth indicator 250, 401, 242, 363, 184, 625, 207 and 568.

## Section II

## CLASSIFICATION

3. Emissions are classified and symbolized according to the following characteristics. Modulation used only for short periods for incidental purposes such as identification, calling, etc., should be ignored.
  - 3.1 Nature of the emission (see § 4 below)
  - 3.2 Method of transmitting information (see § 5 below)
  - 3.3 Additional characteristics (see § 6 below)

---

\*) For certain terms used in this Part 1, see Part 2

## Symbol

4. NATURE OF THE EMISSION

- 4.1 Emission of a radio frequency carrier with no modulation ..... O
- 4.2 Emission predominantly amplitude-modulated <sup>\*)</sup>

- 4.2.1 Double-sideband ..... A
- 4.2.2 Single-sideband, full carrier. .... H
- 4.2.3 Single-sideband, reduced carrier ..... E
- 4.2.4 Single-sideband, suppressed carrier. .... J

Note.--Single-sideband emissions with suppressed carrier modulated only by a single sub-carrier should be classified by considering the radio frequency produced by the sub-carrier as the main carrier frequency.

- 4.2.5 Independent sidebands. .... B
- 4.2.6 Vestigial sideband ..... C

4.3 Emission angle-modulated <sup>\*)</sup>

- 4.3.1 Frequency modulation ..... F
- 4.3.2 Phase modulation ..... G

Note.-- When phase-modulation is used as a preliminary step in the production of an amplitude-modulated or of frequency-modulated signal, the resulting modulation of the carrier should be considered as amplitude-modulation or frequency-modulation, respectively.

## 4.4 Emission of pulses

- 4.4.1 Unmodulated pulse trains ..... P
- 4.4.2 A carrier modulated either in amplitude or in angle by a sequence of pulses which are modulated in turn by the basic signal:
- 4.4.2.1 in amplitude ..... K
- 4.4.2.2 in width or duration ..... L
- 4.4.2.3 in phase or position ..... M
- 4.4.2.4 in code. .... N

\* Emissions in which frequency-shift keying modulates the basic signal are classified as a type of frequency modulation under § 4.3.1. Those involving both frequency-shift keying and amplitude modulation are classified under § 4.5.

4.3	Modulation by combinations of the foregoing or by other means . . . . .	Q
4.5	Emission modulated simultaneously or in a pre-established sequence by a combination of two or more of the following : amplitude modulation, angle modulation, pulses *) . . . . .	W
4.6	Two or more main carriers emitted simultaneously or in a pre-established sequence as a single emission not including video for television. . . . .	Z
4.7	Classification not specified (by administration) or not determined (by monitoring station) . . . . .	X
4.8	Cases not otherwise covered . . . . .	Y
5.	<u>METHOD OF TRANSMITTING INFORMATION</u>	
5.1	No modulation . . . . .	0
5.2	A single quantized information channel without the use of a modulating sub-carrier . . . . .	1
5.3	Two or more quantized information channels operating simultaneously or in a pre-established sequence . . . . .	2
5.4	A single analogue information channel. . . . .	3
5.5	Two or more analogue information channels operating simultaneously or in a pre-established sequence . . . . .	4
5.6	System including video channel or channels for television, with or without additional information, except when this video is quantized for transmission . . . . .	5
5.7	System including analogue information quantized for transmission . . . . .	6
5.8	A single quantized information channel with the use of a modulating sub-carrier. . . . .	7
5.9	Composite system, not including video for television, transmitting simultaneously or in a pre-established sequence one or more quantized information channels together with one or more analog information channels . . . . .	8
5.10	Cases not otherwise covered. . . . .	9

\* Emissions in which frequency-shift keying modulates the basic signal are classified as a type of frequency modulation under § 4.3.1. Those involving both frequency-shift keying and amplitude modulation are classified under § 4.5.

## 6. ADDITIONAL CHARACTERISTICS

Two letters are used. The first describes the characteristics of quantized information channels (if any) and the second describes the characteristics of analogue information channels (if any). Multiplex emissions having both quantized and analogue information channels are described with symbols conveying substantive information in both positions. Emissions lacking either quantized or analogue information channels are described with the letter O in one position or the other. The letter X shall be used when the information is not specified.

6.1 The first letter describes the characteristics of the quantized information as follows:

6.1.1 No quantized information channel . . . . . O

6.1.2 A single quantized information channel

6.1.2.1 Code with elements of differing numbers and/or durations  
(e.g. Morse) for aural reception . . . . . A

6.1.2.2 Code with elements of differing numbers and/or durations  
(e.g. Morse) for automatic reception . . . . . D

6.1.2.3 Code with elements of the same number and duration  
(e.g. teleprinter) without error-correction . . . . . B

6.1.2.4 Code with elements of the same number and duration  
(e.g. teleprinter) with error-correction . . . . . C

6.1.2.5 Quantized facsimile (including Hellschreiber) . . . . . K

6.1.2.6 Quantized data transmission . . . . . G

6.1.3 Two or more quantized information channels, with or without error correction

6.1.3.1 Four-frequency duplex with or without time-division  
sub-multiplexing . . . . . L

6.1.3.2 Frequency-division multiplex . . . . . W

6.1.3.3 Time-division multiplex . . . . . H

6.1.3.4 A combination of frequency-division and time-division multiplex . . J

6.1.4 Classification not specified (by Administration) or not determined  
(by monitoring station) . . . . . X

6.1.5 Cases not otherwise covered . . . . . Y

6.2 The second letter describes the characteristics of the analogue information as follows:

6.2.1	No analog information channels . . . . .	0
6.2.2	Telephone channels	
6.2.2.1	Sound channel or channels of broadcasting quality . . . . .	M
	Note. Stereophony or multiplexing is indicated by the use of the numeral 4, in the emission designator.	
6.2.2.2	Telephone channel (or channels) of good commercial quality	
6.2.2.2.1	With privacy or security device . . . . .	P
	Note: This symbol should be used for multichannel telephone emission if half or more of the channels are equipped with a privacy or similar device which significantly alters the usual form of the signal energy spectrum.	
6.2.2.2.2	Without privacy or security device. . . . .	Q
6.2.2.3	Telephone channel (or channels) of good commercial quality with separate frequency-modulated signals to control the level of demodulated speech signal (e.g. Lincompex) . . . . .	R
6.2.2.4	Telephone channel or channels of marginal commercial quality	N
6.2.2.5	Telephone channel or channels of just usable quality . . . . .	V
6.2.3	Other types of analogue information channels	
6.2.3.1	Monochrome television . . . . .	T
6.2.3.2	Colour television . . . . .	U
6.2.3.3	Analogue facsimile . . . . .	K
6.2.3.4	Analogue data transmission . . . . .	G
6.2.4	Classification not specified (by Administration) or not determined (by monitoring station) . . . . .	X
6.2.5	Cases not otherwise covered . . . . .	Y

PART 2

## THE MEANING OF CERTAIN TERMS AS USED IN THIS ANNEX

*Basic signal*

A signal as originally formed to represent a single sequence of information in analogue or quantized form.

*Main carrier*

The wave that may be combined with a modulating signal in the last modulation stage of a radio transmitter.

*Sub-carrier*

A carrier which is employed in an intermediate modulating process and then applied as a modulating signal to modulate another carrier.

*Modulation*

Process by which certain characteristics of a wave are modified in accordance with a characteristic of another wave or a signal (such as the basic signal).

*Modulation* (sense appropriate to the purpose of telegraphy); *keying*

Process of varying in time one or more given characteristics of an electromagnetic wave or of a direct current brought about directly (in the case of facsimile telegraphy), or by means of an appropriate code (in the case of alphabetic telegraphy), according to the contents of the document to be transmitted.

*Analogue signal*

A signal that follows the variation of a physical phenomenon continuously with an infinite number of possible values.

*Quantized signal*

A signal that varies over a finite number of discrete values.

*Information Channel*

A single message path, usually as distinct from other parallel message paths in the same emission.

PART 3EXAMPLES

Description	Present symbol Art. 2 of the Radio Regulations	Symbol proposed §§ 4 and 5 § 6
<p>I. <u>No modulation</u></p> <p>A. Emission of a radio-frequency carrier with no modulation</p> <p>A.1 No quantized or analogue information channels (CW radar)</p> <p>B. Unmodulated pulse train</p>	<p>or { AØ FØ</p> <p>PØ</p>	<p>ØØ ØØ</p> <p>PØ ØØ</p>
<p>II. <u>A single quantized information channel without the use of a modulating sub-carrier</u></p> <p>A. Emission predominantly amplitude-modulated</p> <p>A.1 Double-sideband (on-off keying)</p> <p>A.1.1 Code with elements of differing numbers and/or durations, aural reception (Morse)</p> <p>A.1.2 Code with elements of differing numbers and/or durations, automatic reception (Morse)</p> <p>A.1.3 (telemetry)</p> <p>B. Emission angle modulated</p> <p>B.1 Code with elements of differing numbers and/or durations, automatic reception (frequency shift keying Morse)</p>	<p>A1</p> <p>A1</p> <p>A1</p> <p>F1</p>	<p>.A1 AØ</p> <p>A1 DØ</p> <p>A1 YØ</p> <p>F1 DØ</p>



Description	Present symbol Art. 2 of the Radio Regulations	Symbol proposed §§ 4 and 5 § 6
B.2 Code with elements of the same number and duration without error-correction (frequency shift keying teleprinter)	F1	F1 B0
B.3 Code with elements of the same number and duration with error-correction (frequency shift keying teleprinter)	F1	F1 C0
B.4 Quantized facsimile (weather chart)	F4	F1 K0
B.5 Quantized data transmission	F1	F1 G0
C. Emission of pulses		
C.1 A carrier modulated either in amplitude or in angle by a sequence of pulses which are modulated in turn by the basic signal :		
C.1.1 in code (telemetry signals)	PLG	N1 Y0
<u>III. Two or more quantized information channels operating simultaneously or in a pre-established sequence</u>		
A. Emission predominantly amplitude-modulated		
A.1 Double-sideband (with two or more audio-frequency sub-carriers)		
A.1.1 (standard frequency emission)	A2	A2 Y0
B. Emission angle-modulated		
B.1 Four-frequency duplex	F6	F2 L0
B.2 Frequency-division multiplex (independent-sidebands; quantized facsimile, data transmission etc.) 1)	A9B	F2 W0

- 1.) This example, which is consistent with others in this Part, illustrates a new concept of designating complex modulations and requires further study.

Description	Present symbol Art. 2 of the Radio Regulations	Symbol proposed §§ 4 and 5 § 6
B.3 Frequency-division multiplex (single-sideband suppressed carrier; code with elements of the same number and duration with error-correction, voice-frequency telegraphy) <sup>1)</sup>	A7J	F2 WO
B.4 Time-division multiplex (code with elements of the same number and duration with error-correction)	F1	F2 HO
IV. <u>A single analogue information channel</u>		
A. Emission predominantly amplitude- modulated		
A.1 Double-sideband		
A.1.1 sound channel of broadcasting quality	A3	A3 OM
A.1.2 telephone channel of marginal commercial quality	A3	A3 ON
A.1.3 telephone channel of good commercial quality with privacy device	A3	A3 OP
A.1.4 telephone channel of good commercial quality without privacy device	A3	A3 OQ
A.1.5 analogue facsimile	A4	A3 OK
A.2 Single-sideband, full carrier		
A.2.1 sound channel of broadcasting quality	A3H	H3 OM
A.2.2 telephone channel of good commercial quality with privacy device	A3H	H3 OP

- 1) This example, which is consistent with others in this Part, illustrates a new concept of designating complex modulations and requires further study.

Description	Present symbol Art. 2 of the Radio Regulations	Symbol proposed §§ 4 and 5 § 6
A.2.3 telephone channel of marginal commercial quality	A3H	H3 ON
A.2.4 (analogue radiodetermination)	A2H	H3 OY
A.3 Single-sideband, reduced carrier		
A.3.1 sound channel of broadcasting quality	A3A	E3 OM
A.3.2 telephone channel of just usable quality	A3A	E3 OV
A.4 Single-sideband, suppressed carrier		
A.4.1 telephone channel of good commercial quality with separate frequency modulated signals to control the level of demodulated speech signals (Lincompex)	A3J	J3 OR
A.5 Vestigial sideband		
A.5.1 sound channel of broadcasting quality	A3C	C3 OM
B. Emission angle-modulated		
B.1 Frequency modulation		
B.1.1 sound channel of broadcasting quality	F3	F3 OM
B.1.2 telephone channel of good commercial quality without privacy device.	F3	F3 OQ
B.1.3 analogue facsimile	F4	F3 OK
B.1.4 analogue facsimile (frequency modulation by the basic signal of an audio-frequency sub-carrier which modulates the main carrier in the single-sideband suppressed-carrier mode) <sup>1)</sup>	A4J	F3 OK

- 1) This example, which is consistent with others in this Part, illustrates a new concept of designating complex modulations and requires further study.

Description	Present symbol Art. 2 of the Radio Regulations	Symbol proposed §§ 4 and 5 § 6
<p>C. Emission of pulses</p> <p>C.1 A carrier modulated either in amplitude or in angle by a sequence of pulses which are modulated in turn by the basic signal</p> <p>C.1.1 in amplitude</p> <p>C.1.1.1 telephone channel of good commercial quality without privacy device</p> <p>C.1.2 in phase or position</p> <p>C.1.2.1 analogue data transmission</p> <p>C.1.2.2 (analogue telecommand)</p> <p>C.1.3 in code</p> <p>C.1.3.1 telephone channel of good commercial quality without privacy device</p>	<p>P3D</p> <p>PlF</p> <p>PlF</p> <p>P3G</p>	<p>K3 OQ</p> <p>M3 OG</p> <p>M3 OY</p> <p>N3 OQ</p>
<p>V. <u>Two or more analogue information channels operating simultaneously or in a pre-established sequence</u></p>		
<p>A. Emission predominantly amplitude-modulated</p> <p>A.1 Double-sideband</p> <p>A.1.1 (stereophonic) sound channels of broadcasting quality</p> <p>A.1.2 radiodetermination (by modulation of two audio-frequency sub-carriers)</p> <p>A.2 Single-sideband, full carrier</p> <p>A.2.1 several telephone channels of good commercial quality more than half of which are with privacy device</p>	<p>A3</p> <p>-</p> <p>A3H</p>	<p>A4 OM</p> <p>A4 OY</p> <p>H4 OP</p>

Description	Present symbol Art. 2 of the Radio Regulations	Symbol proposed §§ 4 and 5 § 6
A.3 Single-sideband, reduced-carrier		
A.3.1 sound channels of broadcasting quality	A3A	E4 OM
A.4 Single-sideband, suppressed-carrier		
A.4.1 telephone channels of good commercial quality with privacy device on each channel	A3J	J4 OP
A.5 Independent-sidebands		
A.5.1 sound channels of broadcasting quality	A3B	B4 OM
A.5.2 telephone channels of good commercial quality with privacy device	A3B	B4 OP
B. Emission angle-modulated		
B.1 Frequency modulation		
B.1.1 analogue facsimile (by frequency modulation of sub-carriers on independent sidebands) <sup>1)</sup>	A4B	F4 OK
B.1.2 (stereophonic) sound channels of broadcasting quality	F3	F4 OM
B.1.3 telephone channels of good commercial quality without privacy device	F3	F4 OQ
C. Emission modulated simultaneously or in a pre-established sequence by a combination of amplitude modulation, angle modulation and/or by pulses		

- 1) This example, which is consistent with others in this Part, illustrates a new concept of designating complex modulations and requires further study.

Description	Present symbol Art. 2 of the Radio Regulations	Symbol proposed §§ 4 and 5 § 6
C.1 Telephone channels of good commercial quality with separate frequency-modulated signals to control the level of demodulated speech signal (Lincompex) (independent-sideband reduced carrier)	A3B	W4 OR
VI. <u>System including video channel or channels for television, with or without additional information, except when this video is quantized for transmission</u>		
A. Emission predominantly amplitude-modulated		
A.1 Vestigial-sideband		
A.1.1 monochrome television with amplitude-modulated vision	A5C	C5 TO or TY <sup>2)</sup>
A.1.2 colour television with amplitude-modulated vision	A5C	C5 UO or UY <sup>2)</sup>
B. Emission angle-modulated		
B.1 Frequency modulation		
B.1.1 monochrome television with frequency-modulated vision	F5	F5 TO or TY <sup>2)</sup>
B.1.2 colour television with frequency-modulated vision	F5	F5 UO or UY <sup>2)</sup>
VII. <u>System including analogue information quantized for transmission</u>		
A. Emission of pulses		
A.1 A carrier modulated either in amplitude or in angle by a sequence of pulses which are modulated in turn by the basic signal		

2) The symbol "Y" is intended to account for the quantized synchronization pulses.

Description	Present symbol Art. 2 of the Radio Regulations	Symbol proposed §§ 4 and 5 § 6
A.1.1 in code		
A.1.1.1 telephone channels of good commercial quality without privacy device	P3G	N6 OQ
A.1.1.2 (composite emission of telephony video for television, quantized and analogue data, etc. in indeterminable proportions)	P9G	N6 YY
<u>VIII.A single quantized information channel with the use of a modulating sub-carrier</u>		
A. Emission predominantly amplitude-modulated		
A.1 Double-sideband		
A.1.1 code with elements of differing numbers and/or durations for aural reception (Morse) (on-off keying of modulated carrier)	A2	A7 AO
A.1.2 code with elements of differing numbers and/or durations for automatic reception (on-off keying of modulating sub-carrier)	A2	A7 DO
A.2 Single-sideband, full carrier		
A.2.1 (standard frequency emission)	A2H	H7 YO
A.2.2 code with elements of the same number and duration without error-correction (sequential single frequency code selective calling signal, Appendix 20C of the Radio Regulations)	A2H	H7 BO
A.3 Single-sideband, suppressed carrier		
A.3.1 code with elements of differing numbers and/or durations for automatic reception (on-off keying of modulating sub-carrier)	A2J	J7 DO

Description	Present, symbol Art. 2 of the Radio Regulations	Symbol proposed §§ 4 and 5 § 6
B. Emission angle-modulated		
B.1 Frequency modulation		
B.1.1 code with elements of the same number and duration with error-correction (narrow-band direct-printing signal, frequency shift keying of modulating sub-carrier)	F1	F7 CO
IX. <u>Composite systems, not including video for television, simultaneously or in a pre-established sequence transmitting one or more quantized information channels together with one or more analogue information channels</u>		
A. Emission predominantly amplitude-modulated		
A.1 Double-sideband		
A.1.1 code with elements of differing numbers and/or durations for automatic reception (on one sub-carrier) together with one telephone channel of just usable quality (on a second sub-carrier)	A9	A8 DV
A.1.2 main carrier modulated by : - a 30 Hz sub-carrier, - a carrier resulting from a 9 960 Hz tone frequency-modulated by a 30 Hz tone, - a telephone channel of just usable quality, - a 1 020 Hz keyed tone for continual morse identification. (VOR with voice)	A9	A8 YV
A.2 Independent sideband		



Description	Present symbol Art. 2 of the Radio Regulations	Symbol proposed §§ 4 and 5 § 6
A.2.1 (six telegraph channels of code with elements of the same number and duration with error-correction together with three telephone channels of good commercial quality with privacy devices)	A9B	B8 CP
B. Emission angle-modulated		
B.1 Frequency modulation		
B.1.1 code with elements of the same number and duration without error-correction (FSK* channels) together with telephone channels of good commercial quality without privacy devices	F9	F8 BQ
C. Combination of amplitude modulation and angle modulation		
C.1 Code with elements of the same number and duration with error-correction (FSK channels) together with telephone channels of good commercial quality without privacy devices	A9B	W8 CQ

\* Frequency shift keying.

Appendix 2

To I.F.R.B. Circular-letter No.

DECISION 1

(RESOLUTION 41)

CLASSIFICATION AND DESIGNATION OF EMISSIONS

(Annex to Opinion 44)

(1970 - 1974)

The C.C.I.R.,

CONSIDERING

- (a) that studies of the contributions related to Question 1/1 from Administrations and the I.F.R.B. have been made by the International Working Party I/1\*;
- (b) that as a result of this study, Report 175, Geneva 1963, had been established proposing a new method for the classification and designation of emissions;
- (c) that partial trials have been conducted by several Administrations and the I.F.R.B. to ascertain the effectiveness of the new method proposed;
- (d) that as a result of these partial trials, it has been possible to introduce improvements into the method which is described previously in Recommendation 432-1 (New Delhi, 1970);

UNANIMOUSLY DECIDES

1. that the Interim Working Party 1/1 should continue to function;

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\* Now Interim Working Party 1/1.

2. that Administrations should be invited to send their comments on the result of the application of Annex to Opinion 44 to the Director of the C.C.I.R., who will transmit them to the Chairman, Interim Working Party 1/1;
3. that the Chairman, Interim Working Party 1/1, should be invited to collect the comments received and circulate them to the Party for study, and to present the results of its work to the next meeting of Study Group 1.

Note.— The Administrations of the Federal Republic of Germany, the United States of America, France, Japan, the United Kingdom, Sweden, Switzerland, U.S.S.R. and the I.F.R.B. have expressed their desire to continue participating in this Interim Working Party and will communicate to the Director of the C.C.I.R. the names and addresses of their representatives. The work of the Interim Working Party will be coordinated by a member of the I.F.R.B.

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## Designation of Emissions

- 104 § 1. Emissions are designated according to their classification and their necessary bandwidth.

### Section I. Classification

- 105 § 2. Emissions are classified and symbolized according to the following characteristics<sup>1</sup>:

- (1) Type of modulation of main carrier
- (2) Type of transmission
- (3) Supplementary characteristics

106	§ 3.	(1) <i>Types of modulation of main carrier :</i>	<i>Symbol</i>
		a) Amplitude	A
		b) Frequency (or Phase)	F
		c) Pulse	P
107		(2) <i>Types of transmission :</i>	<i>Symbol</i>
		a) Absence of any modulation intended to carry information	0
		b) Telegraphy without the use of a modulating audio frequency	1
		c) Telegraphy by the on-off keying of a modulating audio frequency or audio frequencies, or by the on-off keying of the modulated emission (special case : an unkeyed modulated emission)	2

105.1 <sup>1</sup> As an exception to the provisions of Nos. 106 to 108, damped waves are designated by B.

d) Telephony (including sound broadcasting)	3
e) Facsimile (with modulation of main carrier either directly or by a frequency modulated sub-carrier)	4
f) Television (vision only)	5
g) Four-frequency duplex telegraphy	6
h) Multichannel voice-frequency telegraphy	7
i) Cases not covered by the above	9

108

(3) *Supplementary characteristics :*

a) Double sideband	(none)
b) Single sideband :	
— reduced carrier	A
— full carrier	H
— suppressed carrier	J
c) Two independent sidebands	B
d) Vestigial sideband	C
e) Pulse :	
— amplitude modulated	D
— width (or duration) modulated	E
— phase (or position) modulated	F
— code modulated	G

109 § 4.

The classification of typical emissions is tabulated as follows :

Type of Modulation of Main Carrier	Type of Transmission	Supplementary Characteristics	Symbol
Amplitude Modulation	With no modulation	—	A0
	Telegraphy without the use of a modulating audio frequency (by on-off keying)	—	A1
	Telegraphy by the on-off keying of an amplitude-modulating audio frequency or audio frequencies, or by the on-off keying of the modulated emission (special case: an unkeyed emission amplitude modulated)	—	A2
	Telephony	Double sideband	A3
		Single sideband, reduced carrier	A3A
		Single sideband, suppressed carrier	A3J
		Two independent sidebands	A3B
	Facsimile (with modulation of main carrier either directly or by a frequency modulated sub-carrier)	—	A4
		Single sideband, reduced carrier	A4A
	Television	Vestigial sideband	A5C
	Multichannel voice-frequency telegraphy	Single sideband, reduced carrier	A7A
	Cases not covered by the above, e.g. a combination of telephony and telegraphy	Two independent sidebands	A9B

Type of Modulation of Main Carrier	Type of Transmission	Supplementary Characteristics	Symbol
Frequency (or Phase) Modulation	Telegraphy by frequency shift keying without the use of a modulating audio frequency: one of two frequencies being emitted at any instant	—	F1
	Telegraphy by the on-off keying of a frequency modulating audio frequency or by the on-off keying of a frequency modulated emission (special case: an unkeyed emission, frequency modulated)	—	F2
	Telephony	—	F3
	Facsimile by direct frequency modulation of the carrier	—	F4
	Television	—	F5
	Four-frequency duplex telegraphy	—	F6
	Cases not covered by the above, in which the main carrier is frequency modulated	—	F9

Type of Modulation of Main Carrier	Type of Transmission	Supplementary Characteristics	Symbol
Pulse Modulation	A pulsed carrier without any modulation intended to carry information (e.g. radar)	—	P0
	Telegraphy by the on-off keying of a pulsed carrier without the use of a modulating audio frequency	—	P1D
	Telegraphy by the on-off keying of a modulating audio frequency or audio frequencies, or by the on-off keying of a modulated pulsed carrier (special case: an unkeyed modulated pulsed carrier)	Audio frequency or audio frequencies modulating the amplitude of the pulses	P2D
		Audio frequency or audio frequencies modulating the width (or duration) of the pulses	P2E
		Audio frequency or audio frequencies modulating the phase (or position) of the pulses	P2F



Type of Modulation of Main Carrier	Type of Transmission	Supplementary Characteristics	Symbol
Pulse Modulation	Telephony	Amplitude modulated pulses	P3D
		Width (or duration) modulated pulses	P3E
		Phase (or position) modulated pulses	P3F
		Code modulated pulses (after sampling and quantization)	P3G
	Cases not covered by the above in which the main carrier is pulse modulated	—	P9

## Section II. Bandwidths

- 110 § 5. Whenever the full designation of an emission is necessary, the symbol for that emission, as given above, shall be preceded by a number indicating in kilocycles per second the necessary bandwidth of the emission. Bandwidths shall generally be expressed to a maximum of three significant figures, the third figure being almost always a nought or a five.
- 111 § 6. The necessary bandwidths of various classes of emissions and examples of the designation of emissions are given

### Examples of Necessary Bandwidths and Designations of Emissions

(See Article 2, Section II)

The necessary bandwidth may be determined by one of the following methods :

- a) use of the formulae included in the following Table which also gives examples of necessary bandwidths and designation of corresponding emissions ;
- b) computation in accordance with C.C.I.R. Recommendations ;
- c) measurement, in cases not covered by a) or b) above.

The value so determined should be used when the full designation of an emission is required.

However, the necessary bandwidth so determined is not the only characteristic of an emission to be considered in evaluating the interference that may be caused by that emission.

In the formulation of the Table, the following terms have been employed :

- $B_n$  = Necessary bandwidth in cycles per second.
- $B$  = Telegraph speed in bauds.
- $N$  = Maximum possible number of black plus white elements to be transmitted per second, in facsimile and television.
- $M$  = Maximum modulation frequency in cycles per second.
- $C$  = Sub-carrier frequency in cycles per second.
- $D$  = Half the difference between the maximum and minimum values of the instantaneous frequency. Instantaneous frequency is the rate of change of phase.
- $t$  = Pulse duration in seconds.
- $K$  = An overall numerical factor which varies according to the emission and which depends upon the allowable signal distortion.

Description and Class of Emission	Necessary Bandwidth in cycles per second	Examples	
		Details	Designation of Emission
I. AMPLITUDE MODULATION			
Continuous wave Telegraphy, A1	$B_n = BK$  $K = 5$ for fading circuits  $K = 3$ for non-fading circuits	Morse code at 25 words per minute, $B = 20$ , $K = 5$ ; Bandwidth: 100 c/s.  Four-channel time-division multiplex, 7-unit code, 42.5 bauds per channel, $B = 170$ , $K = 5$ ; Bandwidth: 850 c/s.	0.1A1      0.85A1
Telegraphy modulated by an audio frequency, A2	$B_n = BK + 2M$  $K = 5$ for fading circuits  $K = 3$ for non-fading circuits	Morse code at 25 words per minute, $B = 20$ , $M = 1\ 000$ , $K = 5$ ; Bandwidth: 2 100 c/s.	2.1A2
Telephony, A3	$B_n = M$ for single sideband  $B_n = 2M$ for double sideband	Double sideband telephony, $M = 3\ 000$ ; Bandwidth: 6 000 c/s.  Single sideband telephony, reduced carrier, $M = 3\ 000$ ; Bandwidth: 3 000 c/s.  Telephony, two independent sidebands, $M = 3\ 000$ ; Bandwidth: 6 000 c/s.	6A3    3A3A  6A3B

Description and Class of Emission	Necessary Bandwidth in cycles per second	Examples	
		Details	Designation of Emission
Sound Broadcasting, A3	$B_n = 2M$ $M$ may vary between 4 000 and 10 000 depending on the quality desired.	Speech and music, $M = 4\ 000$ ;  Bandwidth: 8 000 c/s.	8A3
Facsimile, carrier modulated by tone and by keying. A4	$B_n = KN + 2M$ $K = 1.5$	The total number of picture elements (black plus white) transmitted per second is equal to the circumference of the cylinder multiplied by the number of lines per unit length and by the speed of rotation of the cylinder in revolutions per second.  Diameter of cylinder = 70 mm, number of lines per mm = 5, speed of rotation = 1 r.p.s., $N = 1\ 100$ , $M = 1\ 900$ ;  Bandwidth: 5 450 c/s.	5-45A4
Television (Vision and Sound), A5 and F3	Refer to relevant C.C.I.R. documents for the bandwidths of the commonly used television systems.	Number of lines = 625; Number of lines per second = 15 625; Video bandwidth: 5 Mc/s;  Total vision bandwidth: 6.25 Mc/s.; FM sound bandwidth including guard bands: 0.75 Mc/s, Total bandwidth: 7 Mc/s.	6 250A5C 750F3

Description and Class of Emission	Necessary Bandwidth in cycles per second	Examples	
		Details	Designation of Emission
II. FREQUENCY MODULATION			
Frequency-shift Telegraphy F1	$B_n = 2.6D + 0.55B$ for $1.5 < \frac{2D}{B} < 5.5$  $B_n = 2.1D + 1.9B$ for $5.5 \leq \frac{2D}{B} \leq 20$	Four-channel time-division multiplex with 7-unit code, 42.5 bauds per channel, $B = 170$ , $D = 200$ ; $\frac{2D}{B} = 2.35$ , therefore the first formula in Column 2 applies; Bandwidth: 613 c/s.	0.6F1
Commercial Telephony, F3	$B_n = 2M + 2DK$  $K$ is normally 1 but under certain conditions a higher value may be necessary.	For an average case of commercial telephony, $D = 15\ 000$ , $M = 3\ 000$ ; Bandwidth: 36 000 c/s.	36F3
Sound Broadcasting, F3	$B_n = 2M + 2DK$	$D = 75\ 000$ , $M = 15\ 000$ and assuming $K = 1$ ; Bandwidth: 180 000 c/s.	180F3

Description and Class of Emission	Necessary Bandwidth in cycles per second	Examples	
		Details	Designation of Emission
Facsimile, F4	$B_n = KN + 2M + 2D$ $K = 1.5$	(See facsimile, amplitude modulation). Diameter of cylinder = 70 mm, number of lines per mm = 5, speed of rotation = 1 r.p.s., $N = 1\ 100$ , $M = 1\ 900$ , $D = 10\ 000$ ; Bandwidth: 25 450 c/s.	25.5F4
Four-frequency duplex Telegraphy, F6	If the channels are not synchronized, $B_n = 2.6D + 2.75B$ where $B$ is the speed of the higher speed channel. If the channels are synchronized the bandwidth is as for F1, $B$ being the speed of either channel.	Four-frequency duplex system with 400 c/s spacing between frequencies, channels not synchronized, 170 bauds keying in each channel, $D = 600$ , $B = 170$ ; Bandwidth: 2 027 c/s.	2.05F6

Description and Class of Emission	Necessary Bandwidth in cycles per second	Examples	
		Details	Designation of Emission
III. PULSE MODULATION			
Unmodulated Pulse, P0	$B_n = \frac{2K}{t}$ <p><math>K</math> depends upon the ratio of pulse duration to pulse rise time. Its value usually falls between 1 and in 10 and many cases it does not need to exceed 6.</p>	$t = 3 \times 10^{-6}$ , $K = 6$ ; Bandwidth: $4 \times 10^5$ c/s.	4 000 P0
Modulated Pulse, P2 or P3	The bandwidth depends on the particular types of modulation used, many of these being still in the development stage.	—	—

TYPE OF POWER TO BE LISTED  
ACCORDING TO CLASS OF EMISSION

Class of Emission	Type of Power
A0- (including standard frequency without modulation)	Pc
A1	Pp
A2 A2A A2J A2H A2B	Pp Pp Pp Pp
A3- Sound broadcasting A3 A3A A3J A3H A3B	Pc Pm Pp Pm Pp
A4 A4A A4J A4H A4B	Pm Pp Pm Pp
A5 A5C	Pp Pp
A7 A7A A7J A7H A7B	Pm Pp Pm Pp
A9 A9A A9J A9H A9B	Pm Pp Pm Pp
F1 to F9	Pm
P0 P1 P2D P3D P3E P3F P2E P2F	Pp Pp Pp Pp Pp



## III. Symbols for Type of Antenna

HOR	Horizontal non-directive antenna
VER	Vertical non-directive antenna
DP	Dipole
H	Horizontal
V	Vertical
R	With reflector
	(Example: DPHR means: Horizontal dipole with reflector)
<hr/>	
H	Horizontal dipole curtain antenna
R	With reflector curtain
S	Slewed antenna
/..	Number of half wave elements in each row
/..	Number of half wave elements in each stack (one above the other)
/..	Height above ground in full wavelengths of the bottom row of elements
S..	Angle of slew, if any
	(Example: HRS/4/3/2S15 means: Horizontal array with reflector curtain, 4 half wave elements in each row, 3 stacks of dipoles, bottom element 2 wavelengths above the ground, slewed with an angle of 15 degrees)
<hr/>	
RHO	Rhombic antenna
/..	Length of one side of the rhombus, in wavelengths
/..	Height of rhombus above ground, in wavelengths
/..	One half of the interior side angle of rhombus
	(Example: RHO/2.5/0.4/65 means: Rhombic antenna, length of one side 2.5 wavelengths, height above ground 0.4 wavelengths, one half of the interior side angle 65 degrees)
<hr/>	
TRO	Tropical broadcasting antenna
/..	Number of rows
/..	Height above the ground in wavelengths
	(Example: TRO/4/0.2 means: Tropical BC antenna with 4 rows (and 4 dipoles in each row) in a height of 0.2 wavelengths above the ground)

Radio Regulation 490

490 (2) When stations of the same service, such as the land mobile  
Spa2 service, use a band of frequencies above 28 000 kHz in a specific  
area or areas, an individual notice should be drawn up, as prescribed  
in Section C of Appendix 1, which specifies the basic characteristics  
to be furnished, for each frequency on which there are assignments  
within the band; however, the particulars should relate only to a  
typical station. This does not apply to broadcasting stations or to  
other terrestrial stations to which the provisions of Sub-Section IIB  
of this article apply or to other stations of the fixed or mobile service  
which operate in frequency bands listed in Table II of Appendix 28  
with equivalent isotropically radiated power exceeding the corres-  
ponding values listed in the table.

MAY 14 1974

COMITÉ INTERNATIONAL  
D'ENREGISTREMENT DES FRÉQUENCES  
I.F.R.B.



JUNTA INTERNACIONAL  
DE REGISTRO DE FRECUENCIAS  
I.F.R.B.

INTERNATIONAL  
FREQUENCY REGISTRATION BOARD  
I.F.R.B.

References & replies: Send in replies  
When replying, please quote  
Indiquées en la référence de la référence

I.F.R.B. Circular-letter  
No. 304

Q 34 70 00 - 34 80 00  
# Buttiniers, Genève  
Tx 23000

GENÈVE, 19th April 1974  
PLACE DES NATIONS

Subject : Symbols for use in the Master International Frequency Register

Dear Sir,

On behalf of the International Frequency Registration Board,  
I wish to bring the following matter to the attention of your Administration.

1. In No. 571 and No. 639DB of the Radio Regulations it is prescribed that "in any case where a frequency assignment is recorded in the Master Register, the finding reached by the Board shall be indicated by an appropriate symbol in Column 13a". Remarks on findings by the Board are similarly shown in Column 13b and remarks indicating the reasons for findings in Column 13c.
2. The symbols adopted by the Board, together with their meaning, are given in Tables No. 3 and No. 6 of the Preface to the International Frequency List. The symbols used at present were adopted initially on the basis of the Radio Regulations, Geneva, 1959, and were revised by the Board whenever pertinent decisions of subsequent administrative radio conferences were brought into effect. When preparing the implementation of the related decisions of the World Administrative Radio Conference for Space Telecommunications, Geneva, 1971, the Board experienced some difficulty in adding simple new symbols within the same framework to represent its findings or related remarks with respect to the numerous provisions adopted by the Conference. To solve the problem, the Board found it necessary to revise all the symbols used and to adopt a new coding system. The purpose of the present Circular-letter is to inform administrations of the newly adopted coding system and the symbols together with their explanation.

./..

Prière d'adresser toute correspondance officielle à  
Please address all official correspondence to  
Toute correspondance officielle doit être dirigée à


Monsieur le Président de l'I.F.R.B.  
The Chairman of the I.F.R.B.  
Señor Presidente de la I.F.R.B.  
Union internationale des télécommunications  
1211 GENÈVE 20  
Switzerland - Suisse

3. The annexes to the Circular-letter contain the symbols for entry in Columns 13a, 13b and 13c of the Master Register. The explanations accompanying these symbols are given for the advance information of administrations only; the final text relating to each symbol will not necessarily be that shown in the annexes but will be the one published in the I.F.R.B. weekly Circular when it is first used by the Board.

4. As it will take some time to apply the new symbols to the frequency spectrum as a whole, the Board has decided to restrict their application during the initial stage to frequency bands above 28 MHz. Consequently, for some time the Preface to the International Frequency List will contain two separate series of symbols for each column concerned, one for the bands below 28 MHz and one for those above 28 MHz.

5. In establishing the list of symbols contained in the annexes to the present Circular-letter, the Board concentrated mainly on practical cases which have arisen in the application of the Radio Regulations, so that the list should not be regarded as covering all possible cases which may occur.

Yours faithfully,



A. Gromov  
Chairman

Annexes : 3

ANNEX 1SYMBOLS REPRESENTING FINDINGS BY THE BOARD  
IN COLUMN 13a OF THE MASTER REGISTER

According to Appendix 2 to the Radio Regulations, Column 13a is intended to show the "Results of examination and investigations by the I.F.R.B.". It must therefore contain symbols to designate :

- a) the result of the examination of a frequency assignment notice by the I.F.R.B., which concerns essentially the following points :
  - conformity with the Regulations and the Convention
  - co-ordination, where necessary
  - determination, where necessary, of the probability of harmful interference;
- b) the result of the I.F.R.B.'s investigation of the use made of the frequencies.

Each finding reached by the Board following the examination is represented by a symbol. For this purpose, Column 13a comprises four positions : 13a 1, 13a 2, 13a 3 and 13a 4. Each of the first three positions (13a 1, 13a 2 and 13a 3) is intended to contain a symbol in the form of a letter representing the finding relating respectively to each of the three points mentioned in a) above. The fourth position (13a 4) is intended to contain a symbol representing the result of the I.F.R.B. investigations. When, for one reason or another, no symbol is required, a dash is inserted in the appropriate position.

The findings of the Board are expressed either as "favourable" or "unfavourable" with respect to the provisions of the Radio Regulations. Consequently, two symbols have been used in relation to each provision. Favourable findings have been coded by a letter from the first half of the alphabet and unfavourable findings by a letter from the second half of the alphabet.

I. First position (13a1) in Column 13a

This position contains symbols representing the findings of the I.F.R.B. following its examination of a frequency assignment notice with respect to its conformity with the Convention, the Table of Frequency Allocations and the other provisions of the Radio Regulations (excluding those relating to co-ordination, to the determination of the probability of harmful interference and to conformity with Appendix 17, 25, 26 or 27 to the Radio Regulations or conformity with a regional agreement). Each entry in the Master Register therefore has a symbol in this position, with the exception of certain assignments for which a special symbol (3 asterisks) is entered in Column 2d and of entries representing allotments to the Maritime Mobile and Aeronautical Mobile Services.

The symbols to be used in position 13a1 are the following :

- A : Finding favourable with respect to No. 501 of the Radio Regulations.
- N : Finding unfavourable with respect to No. 501 of the Radio Regulations.
- C : Finding favourable with respect to No. 570AB of the Radio Regulations.
- P : Finding unfavourable with respect to No. 570 AB of the Radio Regulations.
- D : Finding favourable with respect to No. 639BM of the Radio Regulations.
- Q : Finding unfavourable with respect to No. 639BM of the Radio Regulations.

II. Second position (13a2) in Column 13a

This position contains symbols representing the findings of the I.F.R.B. following its examination of a frequency assignment notice with respect to its conformity with Appendix 17, 25, 26 or 27 to the Radio Regulations, with a regional agreement or with a co-ordination procedure. If the finding is favourable with respect to conformity with a regional agreement, a reference to that agreement (for example, CPHG, AF66, etc.) is entered in Column 13c at the same time as the symbol representing the finding is entered in this position of Column 13a; if the finding is unfavourable, the reference is preceded by the letter X/ (for example, X/CPHG, X/AF66, etc.).

The symbols to be used in position 13a2 are the following :

- B : Finding favourable with respect to No. 542, 544, 548 or 550 of the Radio Regulations.
- R : Finding unfavourable with respect to No. 542 or No. 548 of the Radio Regulations.
- F : Finding favourable with respect to the provisions of Nos. 554 to 557 of the Radio Regulations.
- G : Finding favourable with respect to the provisions of Nos. 554 to 556 as well as those of No. 558 of the Radio Regulations, following an unfavourable finding with respect to the provisions of No. 557.
- S : Finding favourable with respect to the provisions of Nos. 554 to 556 of the Radio Regulations but unfavourable with respect to those of Nos. 557 and 558.
- T : Finding unfavourable with respect to the provisions of No. 554, 555 or 556 of the Radio Regulations.
- H : Finding favourable with respect to No. 563, 564 or 565 of the Radio Regulations.
- U : Finding unfavourable with respect to No. 563, 564 or 565 of the Radio Regulations.
- C : Finding favourable with respect to No. 570AC of the Radio Regulations, the co-ordination procedure mentioned in No. 492A having been carried out successfully.

- P : Finding unfavourable with respect to No. 570AC of the Radio Regulations, the co-ordination procedure mentioned in No. 492A not having been carried out successfully.
- D : Finding favourable with respect to the provisions of :
- Nos. 639BN and 639B0 of the Radio Regulations, the co-ordination procedures mentioned in Nos. 639AJ and 639AN respectively having been carried out successfully;
  - or No. 639BN when the provisions of No. 639B0 are not applicable;
  - or No. 639B0 when the provisions of No. 639BN are not applicable.
- Q : Finding unfavourable with respect to the provisions of :
- Nos. 639BN and 639B0 of the Radio Regulations, the co-ordination procedures mentioned in Nos. 639AJ and 639AN respectively not having been carried out successfully;
  - or No. 639BN when the provisions of No. 639B0 are not applicable;
  - or No. 639B0 when the provisions of No. 639BN are not applicable.
- W : Finding favourable with respect to No. 639BN of the Radio Regulations but unfavourable with respect to No. 639B0.
- V : Finding unfavourable with respect to No. 639BN of the Radio Regulations but favourable with respect to No. 639B0.
- A : Following the examination referred to in No. 505 of the Radio Regulations, the Board found this frequency assignment to be in conformity with the regional agreement mentioned in column 13c.
- M : The present entry concerning a standard frequency is assumed to have been co-ordinated under Section IV in Article 44 of the Radio Regulations.
- N : Following the examination referred to in No. 505 of the Radio Regulations the Board has found that this frequency assignment is not in conformity with the regional agreement mentioned in column 13c, under symbol X/...



### III. Third position (13a3) in Column 13a

This position contains symbols representing the findings of the I.F.R.B. following examination of a frequency assignment notice with respect to the probability of harmful interference.

The symbols to be used in position 13a3 are the following :

- A : Finding favourable with respect to No. 502 or 503 of the Radio Regulations.
- N : Finding unfavourable with respect to No. 502 or 503 of the Radio Regulations.
- Y : Finding unfavourable with respect to No. 502 or 503 of the Radio Regulations; the notifying administration having resubmitted the notice to the Board and insisted upon its reconsideration under No. 515 of the Radio Regulations, the Board's finding remained unchanged. However :
  - either the notifying administration, when resubmitting its notice, informed the Board that the assignment had been in use for at least sixty days without any complaint of harmful interference having been received, and the assignment was accordingly recorded in the Master Register; but the Board subsequently received information that, during the above-mentioned period of sixty days, the use of the frequency in question had given rise to complaints of harmful interference with one or more assignments already recorded in the Master Register;
  - or the notifying administration, when resubmitting its notice, informed the Board that it was not in a position to state that the assignment had been in use for at least sixty days without any complaint of harmful interference having been received; it nevertheless requested that the assignment be recorded in the Master Register.

These data which carry no date in column 2, have been maintained or recorded, as appropriate, in the Master Register, and are published in the International Frequency List for information purposes only and this does not have the effect of ensuring formal international recognition of them as provided in No. 165 of the Convention. The date on which the Board received the notice is given in column 13c under symbol I/...

- B : Finding favourable with respect to No. 545 of the Radio Regulations.
- R : Finding unfavourable with respect to No. 545 of the Radio Regulations.
- C : Finding favourable with respect to No. 57DAD of the Radio Regulations.
- P : Finding unfavourable with respect to No. 570AD of the Radio Regulations.
- D : Finding favourable with respect to the provisions of :
- Nos. 639BP and 639BQ of the Radio Regulations when the provisions of both these numbers apply, or
  - No. 639BP when the provisions of No. 639BQ do not apply, or
  - No. 639BQ when the provisions of No. 639BP do not apply.
- Q : Finding unfavourable with respect to the provisions of :
- Nos. 639BP and 639BQ of the Radio Regulations when the provisions of both these numbers apply, or
  - No. 639BP when the provisions of No. 639BQ do not apply, or
  - No. 639BQ when the provisions of No. 639BP do not apply.
- W : Finding favourable with respect to No. 639BP of the Radio Regulations but unfavourable with respect to No. 639BQ.
- V : Finding unfavourable with respect to No. 639BP of the Radio Regulations but favourable with respect to No. 639BQ.

- E : The Board found that an unsuccessful attempt had been made, under No. 639AJ or No. 639AN of the Radio Regulations, to co-ordinate the use of this frequency assignment for reception by a space station or an earth station. It therefore determined, for the purposes of No. 639BR, the level of interference caused to this station by any other station operating in the same frequency band for which a frequency assignment in conformity with the provisions of No. 501, 570AB or 639BM is already recorded in the Master Register; following this examination, the Board reached a favourable finding in that the level of interference resulting from all such stations together is below the value considered harmful.
- T : The Board found that an unsuccessful attempt had been made, under No. 639AJ or No. 639AN of the Radio Regulations, to co-ordinate the use of this frequency assignment for reception by a space station or an earth station. It therefore determined, for the purposes of No. 639BR, the level of interference caused to this station by any other station operating in the same frequency band for which a frequency assignment in conformity with the provisions of No. 501, 570AB or 639BM is already recorded in the Master Register; following this examination, the Board reached an unfavourable finding in that the level of interference resulting from all such stations together exceeds the value considered harmful. The Board accordingly informed the notifying administration and, at the request of the latter, recorded this frequency assignment.
- F : A change was made in the basic characteristics of this assignment, which is recorded in the Master Register in conformity with the provisions of No. 272 of the Agreement forming part of the Final Acts of the Extraordinary Administrative Radio Conference, Geneva, 1971, and, after examination of this change with respect to the provisions of No. 534 of the Radio Regulations, the Board concluded that there is no resultant increase in the probability of harmful interference to frequency assignments already recorded in the Master Register. The date on which the I.F.R.B. received the notice concerning the change in the basic characteristics of this assignment appears in column 13c under symbol RR534/...

IV. Fourth position (13a4) in Column 13a

This position contains symbols representing the result of I.F.R.B. investigations of the use made of frequency assignments entered in the Master Register.

The symbols used in position 13a4 are the following :

- N : The present frequency assignment has been recorded in the Master Register under No. 515, 570AGB or No. 639CP of the Radio Regulations. After carrying out the investigation referred to in No. 516, 620 or 639DL, the Board found that there was no reason to modify the unfavourable finding previously reached and represented by an appropriate symbol in position 13a3. The Board was unable, however, to establish the reasons why the emissions represented by this entry have not given rise to complaints of harmful interference to the emissions represented by an assignment or assignments, with which they appear to the Board to be incompatible.
- W : The Board found that there is a probability that the emissions represented by at least one of the assignments recorded in the Master Register under No. 515, 570AGB or 639CP of the Radio Regulations may cause harmful interference to the operation represented by this entry. Following an investigation conducted under No. 516, 620 or 639DL, the I.F.R.B. received confirmation that the present assignment is used in conformity with the notified basic characteristics. However, the Board was unable to establish the reasons why the emissions represented by the assignment or assignments which have been recorded in the Master Register under No. 515, 570AGB or 639CP of the Radio Regulations have not given rise to complaints of harmful interference to the emissions represented by this entry, with which they appear to the Board to be incompatible.
- U : Following an investigation conducted under No. 516, 620 or 639DL of the Radio Regulations, the I.F.R.B. received confirmation that this assignment is used in conformity with the notified basic characteristics.

- Y : Following an investigation conducted by the I.F.R.B. under No. 516 or 620 of the Radio Regulations, the notifying administration has not provided the Board with the necessary or pertinent information within a period of ninety days, or has stated that, although this assignment or entry no longer represents actual operations, it wishes to maintain it in the Master Register. The Board therefore does not take this assignment into account when it examines under No. 502, 503 or 570AD, as appropriate, new frequency assignments notified to it as from the date shown in Column 13c under symbol Y/...
- Z : Following an investigation conducted by the I.F.R.B. under No. 516, 620, 639DO or 639DL of the Radio Regulations, the notifying administration has provided the Board with the necessary or pertinent information, but after a period exceeding the one referred to in No. 621, 639DM or 639DP, as appropriate, or has stated that the assignment is again being used in accordance with the characteristics notified. Accordingly, the Board did not take this assignment into account when examining, with respect to the provisions of No. 502, 503, 570AD, 639BP, 639BQ or 639BR, as appropriate, new frequency assignments notified to it between the dates shown in Column 13c under symbols Y/... and Z/... on the one hand, or under symbols P/... and Z/... or Q/... and Z/..., as appropriate, on the other hand.
- P : Following an investigation conducted by the I.F.R.B. under No. 639DO of the Radio Regulations, the notifying administration has not provided the Board with the necessary or pertinent information within a period of forty-five days. The Board therefore does not take this assignment into account when it examines under No. 639BP or 639BQ, as appropriate, new frequency assignments notified to it as from the date shown in Column 13c under the symbol Y/...
- Q : Following an investigation conducted by the I.F.R.B. under No. 639DL of the Radio Regulations, the notifying administration has not implied to the Board within a period of six months or has not confirmed that regular use of the present assignment will be resumed in six months. The Board, therefore, does not take this assignment into account when it examines, under No. 639BP or 639BQ, as appropriate, new frequency assignments notified to it as from the date shown in Column 13c under symbol Y/...

ANNEX 2SYMBOLS REPRESENTING REMARKS BY THE BOARD APPEARING  
IN COLUMN 13b OF THE MASTER REGISTER

Column 13b contains symbols representing remarks relating either to findings of the I.F.R.B. or to special circumstances in which an entry in the Master Register has been made. In addition, to facilitate the processing of notices, any special circumstance connected with the examination of an assignment (for example, when the Board does not take the assignment into account) is entered in this column.

The symbols to be used in Column 13b are the following :

- A : The examination carried out by the I.F.R.B. showed that there is a slight probability of harmful interference to assignments already recorded in the Master Register; precautions must therefore be taken in using this assignment, as reflected by this entry, in order to avoid harmful interference to assignments already recorded in the Master Register (No. 511 or 639CL of the Radio Regulations).
- B : The examination carried out by the I.F.R.B. with respect to the provisions of Article 7 of the Radio Regulations showed that some of the characteristics of the frequency assignment covered by this entry exceed the limits specified in Article 7. Since these limits are only slightly exceeded, and since the conditions in which the assignment is used in practice are undoubtedly more favourable than those implied by the assumptions on which the calculation was based, the Board reached a favourable finding with respect to the provisions of No. 501, 570AB or No. 639BM of the Radio Regulations, as appropriate.
- C : This entry has been modified and the date originally entered in the appropriate part of Column 2 has been retained in accordance with the provisions of No. 534, 570BB or 639CU of the Radio Regulations. The change in the basic characteristics may increase the probability of harmful interference to this assignment.

- D : In view of the category of the service rendered by this assignment and of the provisions of No. 139 of the Radio Regulations, the Board does not take this assignment into account when carrying out the examination with respect to the provisions of Article 9 or 9A of the Radio Regulations with a view to the recording in the Master Register of frequency assignments belonging to other categories of services. The same applies when the notice contains a reference to a number of Article 5 of the Radio Regulations which makes the provisions of No. 14B applicable to the assignment in question.
- E : After applying to this assignment the provisions of Appendices 28 and 29 to the Radio Regulations, the Board found that it was not necessary to seek coordination under No. 639AJ and/or No. 639AN. Column 13c contains the remark RP639AK and/or RR639AR.
- F : A change was made in the basic characteristics of this frequency assignment and, after examination of this change with respect to the provisions of No. 534, 570BB or 639CU of the Radio Regulations, the Board concluded that there was no resultant increase in the probability of harmful interference to frequency assignments already recorded in the Master Register. The date of receipt by the Board of the notice concerning the change is entered in Column 13c under symbol RR534/..., RR570BB/... or RR639CU/..., as appropriate.
- G : The present frequency assignment has been recorded in the Master Register as a consequence of a favourable finding reached by the I.F.R.B., on the understanding that the new assignment will not affect in practice the reception at one or more notified points located in the territory under the jurisdiction of the notifying administration, of transmissions by one or more than one station operating according to the characteristics of a frequency assignment or frequency assignments, already recorded in the Master Register on behalf of one administration or several administrations.

- H : In the examination of this frequency assignment (or entry) with respect to the provisions of No. 501, 570AB or 639BM of the Radio Regulations, the Board took into account the fact that the necessary bandwidth is partly in a frequency band allocated on a primary or permitted basis to the service rendered by this assignment and partly in a frequency band allocated on a secondary basis to this service.
- U : This frequency assignment is in a band allocated, in the Table of Frequency Allocations, to the service mentioned in Column 6, but is insufficiently separated from one of the limits of this band, so that, on account of its width, the band assigned to the station concerned overlaps the immediately adjoining band. Harmful interference can therefore be caused to the services to which the immediately adjoining band is allocated (No. 116 of the Radio Regulations). The favourable finding with respect to the provisions of No. 501, 570AB or 639BM is maintained as long as the Board is not informed that this frequency assignment causes harmful interference to a frequency assignment situated in the immediately adjoining band and in conformity with the Radio Regulations. When examining another assignment in this immediately adjoining frequency band with respect to the provisions of No. 502, 503, 570AD, 639BP or 639BQ, the Board does not take this entry into account.
- V : In accordance with No. 426 of the Radio Regulations, the Board does not take this entry into account when carrying out its examination with respect to the provisions of No. 502 or 503 with a view to the recording of a frequency assignment to a broadcasting station in the Tropical Zone.



- Y : According to the provisions of the Radio Regulations, the Board does not take this assignment (or entry) into account when carrying out its examination in accordance with the provisions of Articles 9 and 9A with a view to the recording of frequency assignments in the Master Register, for one of the following reasons :
- either the notice contained a reference to No. 115 of the Radio Regulations, in which case Column 13c contains the remark RR115,
  - or the recording was effected under No. 522, 530 or 531 of the Radio Regulations, in which case Column 13c contains the remark RR522, RR530 or RR531, as appropriate,
  - or, as this recording was effected under No. 515, 570AGB or 639CP of the Radio Regulations, Column 13c contains the remark RR515, RR570AGB or RR639CP, as appropriate; however, the I.F.R.B. found that after the prescribed time limits, emissions represented by this entry have given rise to complaints of harmful interference to the operations represented by an assignment or assignments with which they appeared to the Board to be incompatible; therefore, the I.F.R.B. has not taken this entry into account, as from the date listed in Column 13c under symbol Y/...,
  - or this entry bears symbol Y in position 13a3 and, consequently, the I.F.R.B. has not taken it into account as from the date appearing in Column 13c under the symbol Y/...,
  - or, following an investigation conducted by the I.F.R.B. under No. 516 or 620 of the Radio Regulations, the notifying administration did not provide the Board with the necessary or pertinent information within a period of ninety days, or stated that, although this assignment (or entry) no longer represented actual operations, it wished to maintain it in the Master Register; consequently, in accordance with the provisions of No. 621 of the Radio Regulations, the Board ceased to take this entry into account as from the date listed in Column 13c under symbol Y/...,
  - or this frequency assignment bears symbol U in Column 13b and RR116 in Column 13c and the Board is notified of harmful interference to a frequency assignment situated in an immediately adjoining frequency band which is in conformity with the Radio Regulations.

ANNEX 3SYMBOLS REPRESENTING REMARKS BY THE BOARD APPEARING  
IN COLUMN 13c OF THE MASTER REGISTER

Column 13c contains symbols relating to any other remark such as :

- any information concerning the entry which cannot be included in Columns 1 to 12 of the Master Register;
- remarks relating to findings of the I.F.R.B.;
- indications of dates;
- any other information which may be useful when consulting the International Frequency List.

The symbols to be used in Column 13c are the following :

- A/RR.../ "This entry was the subject of an agreement, in accordance with the number of the Radio Regulations represented by the number of this symbol, with the administrations of countries whose names follow the symbol."
- E/..... "The re-submitted notice concerning this entry was received by the I.F.R.B. on the date represented by the digits following the symbol."
- N/... "The administration responsible for this entry asked the I.F.R.B. to seek co-ordination under No. 639AJ, 639AN or 492A of the Radio Regulations, as appropriate, with the administration of the country whose name follows the symbol. As that administration has not answered within the time limits specified, the I.F.R.B. will apply the provisions of No. 639AX or 492FC, as appropriate, in respect of the stations concerned."

- PP/... "At the request of the notifying administration, this entry was reinserted in the Master Register, since there was no, or only a slight, probability of harmful interference to frequency assignments used in accordance with characteristics recorded in the Master Register between the date following the symbol and representing the date of deletion of this entry and the date of its reinsertion, following symbol P in the same column. When this entry was reinserted, the date of the original entry was retained in the appropriate part of Column 2."
- P/... See symbol PP
- T/... "The date following the symbol is the date of receipt by the Board of the notice of this entry which contains symbol Y in sub-Column 13a3."
- X/... "The Board examined this frequency assignment with respect to the provisions of the number of the Radio Regulations which follows the symbol, or with respect to Appendix 17, 18, 25, 26 or 27 of the Radio Regulations, or to a regional agreement designated by an abbreviation following the symbol, and reached the finding that the assignment in question is not in conformity with those provisions, that plan or that agreement."
- Y/... "This frequency assignment includes symbol Y in Column 13b, which signifies that, from the date entered after this symbol, the Board will not take this assignment into account in examining new assignments with respect to the provisions of the Radio Regulations. When Column 13b no longer includes symbol Y, it means that the Board did not take this frequency assignment into account during the period which separates the date following the symbol from the one appearing after symbol Z in the same column."
- Z/... "This entry included symbol Y in Column 13b, which signifies that, from the date entered in Column 13c under symbol Y/..., the Board had ceased to take it into account in the examination conducted with a view to recording assignments in the Master Register. The Board has found that the reasons for this no longer exist and has consequently resumed taking this assignment into account from the date following the symbol, in conducting the examination referred to above."

- 300/AA/.. "The first group of figures following the symbol gives the number of the Special Section of the I.F.R.B. weekly circular used for advance publication, under No. 639AA of the Radio Regulations, of the characteristics of the satellite network or satellite system to which the station using the frequency assignment belongs. The second group of figures gives the number of the weekly circular."
- 301/... "The figures immediately following the Remark number represent the carrier frequency in MHz. When these figures are followed by a symbol designating the name of a country, it means that the characteristics of the carrier have been used as a basis for effecting co-ordination with the administration of that country under Nos. 639AJ and 639AN of the Radio Regulations."
- 302/... "The group of figures following the Remark number gives in dBW the maximum power density per Hz supplied to the antenna as defined in items 8b (section B) and 9b (section D) of Appendix 1A to the Radio Regulations. When this power density is less than 1 Watt per Hertz its value in decibels is preceded by the sign (-)."
- 303/.../... "The two groups of figures following the Remark number represent, in degrees, clockwise from true North, the planned range of operating azimuthal angles for the direction of maximum radiation of the antenna of the earth station communicating with a non-geostationary satellite."
- 304/.../... "The value entered in Column 9a indicates in degrees, clockwise from true North, the azimuth (rounded to the nearest degree) of the direction of maximum radiation of the antenna of the earth station assumed to be pointing towards the satellite in its nominal position on the geostationary satellite orbit. The two groups of figures following the Remark number represent, in degrees and decimal fractions of a degree, the limits within which the azimuth of the direction of maximum radiation of the antenna of the earth station may vary during operation."
- 305/... "The group figures following the Remark number gives the number of the weekly circular which published in detail the other information relating to this entry as specified in Appendix 1A to the Radio Regulations for notification to the I.F.R.B. but which cannot be recorded in any way in the International Frequency List."

- 306/AJ.../... "The first group of figures following the symbol gives the number of the special section of the I.F.R.B. weekly circular which published in detail the information specified in Appendix 1A to the Radio Regulations for notification to the I.F.R.B. but which cannot be reproduced in any form in the International Frequency List. The second group of figures gives the number of the weekly circular concerned."
- 307/... "The group of figures following the Remark number represents in degrees from the horizontal plane the planned minimum operating angle of elevation of the antenna in the direction of maximum radiation, as defined in item 9 (paragraph e)) in Section B and in item 8 (paragraph e)) in Section C of Appendix 1A to the Radio Regulations."
- 308/.../.../... "The first group of figures following the Remark number denotes in degrees E (east) or W (west), the nominal longitude of the geostationary satellite carrying the space station with which this entry is concerned. The two groups of figures which follow indicate in tenths of a degree the longitude and inclination tolerances respectively."
- 309/... "The figures following the Remark number represent in degrees from the equatorial plane the angle of inclination of the orbit of the satellite carrying the space station. When these figures are followed by the letter "R", it means that the revolution of the satellite is retrograde."
- 310/... "The figures following the Remark number represent in degrees, from the ecliptic plane, the angle of inclination of the orbit of the spacecraft carrying the space station."
- 311/... "The figures following the Remark number represent in degrees, from the lunar equatorial plane, the angle of inclination of the orbit of the moon satellite carrying the space station. When these figures are followed by the letter "R", it means that the revolution is retrograde."
- 312/.../... "The first group of figures immediately following the Remark number represents, in kilometres, the altitude of the apogee of the orbit described by the space station. The second group of figures represents, in kilometres, the altitude of the perigee. When the Remark number is followed by only one group of figures, these represent, in kilometres, the altitude of the space station describing a circular orbit."
- 313/... Determination of the magnitude of the orbital axes in relation to the surface of the moon (to be drafted later).
- 314/... Aphelion and perihelion (to be drafted later).

- 315/... "The figures following the Remark number represent, in minutes, the period of the space object carrying the space station. When these figures are followed by the letter J, they then represent the period in days."
- 316/... "The figures following the Remark number give the number of space stations to which this entry refers."
- 317/... "The figures following the Remark number represent, in Kelvins, the total receiving system noise temperature at the in-put of a space station or of an earth station receiver."
- 318/... "The figures immediately following the Remark number represent, in Kelvins, the noise temperature of the satellite link between the earth station with which this entry is concerned and the earth station whose name is represented in abridged form after the figure. When the figures are not followed by any name, they represent a noise temperature representative of any satellite link using the space station designated in Column 4a or 5a."
- 319/... "The figures following the Remark number represent, in metres, the altitude of the antenna above mean sea level."
- 320/... "The figures following the Remark number accompanied, by the letter E or W, as appropriate, represent the limits of the arc of visibility as defined in Item 5, sub-paragraph a)1), in sections D and E of Appendix 1A to the Radio Regulations."
- 321/... "The figures following the Remark number, accompanied by the letter E or W, as appropriate, represent the limits of the service arc as defined in Item 5, sub-paragraph a)2), sections D and E of Appendix 1A to the Radio Regulations."
- 322/... Geographical co-ordinates of the point of intersection with the Earth's surface of the main direction of radiation of the antenna of a space station on board a geostationary satellite (to be drafted later).

- 323/... Pointing accuracy of the antenna of a space station on board a geostationary satellite (to be drafted later).
- 324/... The figures following the Remark number represent the value, in dBW, of the equivalent isotropically radiated power in the direction of maximum radiation of the antenna.
- RR115 .. "The notice relating to this assignment (or entry) contains a reference to No. 115 of the Radio Regulations : consequently, the notifying administration is considered to have undertaken to cease immediately the operations represented by this assignment in accordance with the provisions of No. 611, or to stop the interference immediately in accordance with the provisions of Nos. 611A and 639DE when it is informed that these emissions are actually causing harmful interference to reception by any station operating in accordance with the provisions of No. 501, 570AB or No. 639BM, as appropriate.
- RR492FC/... "The administration of the country whose name follows the symbol asked the I.F.R.B. to seek co-ordination under No. 492A of the Radio Regulations with the administration responsible for this entry. As the latter administration has not replied to the I.F.R.B. within the time limits laid down, the provisions of No. 492FC are applicable to this entry."
- RR518 "The date entered in the appropriate part of Column 2 was determined in accordance with the provisions of No. 518 the Radio Regulations."
- RR515/... "This entry was made under No. 515, 570AGB or 639CP of the  
RR570AGB/... Radio Regulations. The date represented by the figures  
RR639CP/... following the symbol is that on which the I.F.R.B. received the notice that the frequency assignment had been in use at least either sixty days or one hundred and twenty days, as the case may be, without the notifying administration having received any complaints of harmful interference."

- RR522 "The notice to which the present entry relates received an unfavourable finding on the part of the Board with respect to No. 501 of the Radio Regulations and contained no reference to No. 115. The notifying administration resubmitted it to the Board without referring to No. 115; the Board made this entry under No. 522."
- RR530 "The notice to which the present entry relates received an unfavourable finding on the part of the Board with respect to No. 501 of the Radio Regulations and contained no reference to No. 115. The notifying administration resubmitted it to the Board without referring to No. 115, and insisted upon reconsideration of the notice; after such consideration the Board made this entry under No. 530."
- RR531 "The notice to which the present entry relates received an unfavourable finding on the part of the Board with respect to No. 501 of the Radio Regulations and contained no reference to No. 115. The notifying administration resubmitted it to the Board without referring to No. 115, and insisted upon reconsideration of the notice; after such consideration the Board made this entry under No. 531."
- RR534/... "This entry has been modified the figures following the  
RR570BB/...symbol represent the date on which the Board received the  
RR639CU/...notice concerning the change. In accordance with the  
provisions of No. 534, 570BB or 639CU of the Radio Regulations,  
as appropriate, the date or the symbol originally entered in  
the appropriate part of Column 2 was maintained as well as,  
if recorded, the symbol representing the Board's conclusion  
in Column 13a."
- RR639AJ/... "This entry was successfully co-ordinated under No. 639AJ  
of the Radio Regulations with the administrations whose names  
follow the symbol."



RR639AN/... "This entry was successfully co-ordinated under No. 639AN of the Radio Regulations with the administrations whose names follow the symbol."

RR639AX/... "The administration of the country whose name follows the symbol asked the I.F.R.B. to seek co-ordination under No. 639AJ or 639AN of the Radio Regulations with the administration responsible for this entry. As the latter administration has not replied to the I.F.R.B. within the time limits laid down, the provisions of No. 639AX are applicable to this entry."

COORD/... In notifying the frequency assignment which is the subject of this recording, the notifying administration stated that its use had been coordinated with the administrations of countries whose names follow this symbol. When the coordination was carried out through an international organ, the latter's name is shown after the symbol.

AP18 : This recording is in conformity with the provisions of Appendix to the Radio Regulations.

Co-ordination Code

APPENDIX 0-1

Arrangement	Frequency Band (MHz)		Co-ordination Agencies		Co-ordination Code
A	30.56	- 32.0	DOC	FCC	A
	33.0	- 34.0			
	35.0	- 36.0			
	37.0	- 38.0			
	39.0	- 40.0			
	42.0	- 46.6			
	47.0	- 49.6			
	72.0	- 73.0			
	75.4	- 76.0			
	150.8	- 174.0			
	450.0	- 470.0			
	942.0	- 960.0			
	1850.0	- 2200.0			
	2450.0	- 2690.0			
	3700.0	- 4200.0			
	5925.0	- 7125.0			
A	10550	- 10680			
	10700	- 13250	DOC	FCC	A
B	74.6	- 75.4	DOC	FAA	B
	108.0	- 117.975	DOT	FAA	
	117.975	- 121.975	DOT	FAA	
	121.975	- 123.075	DOC	FCC	
	123.075	- 123.575	DOC	FCC	
	123.575	- 128.825	DOT	FAA	
	128.825	- 132.025	DOC	FCC	
	132.025	- 135.0	DOT	FAA	
	135.0	- 136.0	DOC	FAA	
	328.6	- 335.4	DOT	FAA	
	960.0	- 1215.0	DOT	FAA	
	1540.0	- 1660.0	DOC	IRAC	
	4200.0	- 4400.0	DOC	IRAC	
	5000.0	- 5250.0	DOC	IRAC	
B	15400	- 15700	DOC	IRAC	
					B
C	138.0	- 144.0	CDS	JCS	C
	148.0	- 149.9	CDS	JCS	
	150.05	- 150.8	CDS	JCS	
	216.0	- 225.0	CDS	JCS	
	420.0	- 450.0	CDS	JCS	
	890.0	- 942.0	CDS	JCS	
	1215.0	- 1400.0	CDS	JCS	
	1300.0	- 1350.0	DOC	FAA	
	2300.0	- 2450.0	CDS	JCS	
	2700.0	- 2900.0	DOC	FAA	
	2700.0	- 3700.0	CDS	JCS	
	2900.0	- 3100.0	DOC	IRAC	
	5250.0	- 5925.0	CDS	JCS	
	5460.0	- 5650.0	DOC	IRAC	
	8500.0	- 10500.0	CDS	JCS	
	9000.0	- 9200.0	DOC	FAA	
	9300.0	- 9500.0	DOC	IRAC	
	13400	- 14000	CDS	JCS	
	15700	- 17700	CDS	JCS	
	23000	- 24250	CDS	JCS	
C	33400	- 36000	CDS	JCS	
					C

# APPENDIX 0-2

D	32.00	-	33.0	DOC	IRAC	D
	34.0	-	35.0			
	36.0	-	37.0			
	38.0	-	39.0			
D	40.0	-	42.0			
ITU RR228	46.6	-	47.0			
ITU RR228	49.6	-	50.0			
	148.0	-	149.9			
	150.05	-	150.8			
	162.0	-	174.0			
	1710.0	-	1850.0			
	2110.0	-	2120.0			
	2200.0	-	2290.0			
	4400.0	-	4990.0			
D	7125.0	-	8400.0	DOC	IRAC	D
	-	-	-	DOC	DENMARK	E
	-	-	-	DOC	DENMARK & USA	F
Co-ordinated with USA other than under arrangements A, B, C, D.				DOC	USA	G
Not assigned				DOC	PORTUGAL	H
						I - W, Y, Z
See note 8 below						X
Not assigned						O - 7
In USA/CAN coordination zone but not requiring coordination.						8
Not assigned						9

## Notes:

1. DOC - Department of Communications, Canada
2. CDS - Chief of Defence Staff, Canada (Authorized coordination channel only)
3. FAA - Federal Aviation Agency, USA
4. FCC - Federal Communications Commission, USA
5. IRAC - Interdepartment Radio Advisory Committee, USA
6. JCS - Joint Chiefs of Staff, USA
7. For details on areas affected and information to be supplied, consult the full texts of the applicable arrangements.
8. A frequency in any of the above bands, which has been authorized for use exclusively outside the co-ordination zone will be coded X.

Spectrum Management System (Abstract)

The demand for licenses is increasing at a rate of 10% per annum or about 35,000 more applications of all types annually. Using existing semi-manual methods/procedures of spectrum management, the high band VHF land/mobile frequencies will be completely saturated in Toronto by 1979, in Montreal by 1980 and in Vancouver by 1983. This represents a loading of about 80 stations per frequency. Using present procedures, no new users could be accommodated in this band. The result would be to force new users to forego use of radio communication or to utilize more expensive less effective UHF radio equipment. Public and industry pressure might require an untimely change in departmental policy concerning priority and right of use of radio communication.

Although all land/mobile frequencies may be assigned in those cities as forecast, there is no automated method in use to determine the time usage of these frequencies by existing licencees. As the time of use may vary with season, time of day, and day of week according to the users' characteristics, knowledge of the time of use of these frequencies would allow lower utilized frequencies to be shared by others who might otherwise be denied radio communications services.

As a technique, frequency sharing could increase by an estimated 50% the communications carrying capacity of the radio spectrum; however, with present procedures and equipment, it is an extremely slow, costly and inefficient process requiring manual monitoring of each frequency one after another to eventually develop rough averages characterizing utilization. This will not be adequate in the future.

With the extensive concentration of radio transmitters operating in close geographical and frequency proximity in large urban centers and the forecast higher concentration in the near future, present semi-manual methods of frequency assignment are becoming technically obsolete. Approximately 12 hours of technician time is presently required for processing even a simple radio licencee's application and this time is increasing with station concentration.

At present, use of these methods results in as many as 10% of frequency assignments proving unworkable in practice. Errors in frequency assignment may result in embarrassment and increased district office workload for the Department, interference complaints by the public and authorized radio users, and loss in time and money to users during investigation and modification of radio equipment.

The proposal describes an integrated system to deal with the problem of interference, frequency time sharing, and assignment by revamping and extending the computer data base presently containing the technical and other parameters of the licenced stations, by developing a series of electromagnetic compatibility models to predict and assess interference between radio transmitters, by implementing the technique of frequency time sharing on a widespread basis, by the set-up and operation of mobile radio occupancy vans to measure utilization on each frequency channel using automatic computer-controlled scanning receivers and by decentralizing the responsibility for application processing and licensing to the local district offices.

The method of system implementation proposed augments the communications carrying capacity of the fixed radio spectrum available resulting in more efficient use, enlarges the role of the local district office further decentralization of skills and responsibilities, supplies data on spectrum usage by band which can be used in spectrum reallocation studies, and is estimated to allow the saving of \$1,496,000 (22% saving) over the existing system during the first five years of the program. Also, 105 man-years can be saved during this period.

It is reasonable to state that with the ever-increasing demand for licences the introduction of new types of service, the development of more sophisticated equipment and systems primarily concentrated in the major urban areas ... that should the "start up" resources required to augment the effective communications carrying capacity of the radio spectrum not be provided, it is unlikely the department will be able to efficiently licence new radio users of the land/mobile service in the three major urban areas by the early 1980's and other solutions such as reallocation of a portion of the broadcast spectrum might become unavoidable. This, in turn, results in a strong unfavourable reaction from the public, radio industry, and manufacturers.

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IDENTIFICATION AND ANALYSIS OF DATA  
ITEMS FOR ASSIGNMENT LICENSING OF  
THE SPECTRUM MANAGEMENT SYSTEM :  
SMS/ALS

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