
Spectrum Management

Terrestrial Radiocommunication Agreements and Arrangements

Arrangement for the Coordination of Frequencies for Radiobeacons in the Band 200-405 kc/s in Certain Areas of Canada and Greenland

Note

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The agreements and arrangements contained herein have been negotiated under the authority of the Government of Canada by the Department of Communications whose spectrum management and telecommunications programs have been transferred to Industry Canada.

All notes in square brackets [] were added for clarification purposes.

Prepared by:

Industry Canada
Radiocommunications and
Broadcasting Regulatory Branch
300 Slater Street
Ottawa, Ontario
K1A 0C8

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KINGDOM OF DENMARK
MINISTRY OF PUBLIC WORKS

Date 8th February 1966

GENERAL DIRECTORATE OF
POSTS AND TELEGRAPHS

Tietgensgade 37² København V

1.T. No. 672

Department of Transport
Hunter Building
Ottawa, Ontario
Canada

Co-ordination of frequencies in the band 200-405 kc/s

Ref-No.	Ref. date
5856-5 (SRE-B)	18.1.66

Dear Sir,

With reference to your above mentioned letter I hereby have the honour to inform you that my administration agrees that the arrangement for coordination of frequencies for radiobeacons in the band 200-405 kc/s in certain areas of Canada and Greenland took effect on the date of receipt of your letter, i.e., the 24th of January 1966. I wish to thank you for your co-operation in this matter.

The following radiobeacons from your recapitulatory list of radiobeacons in northern Canada, forwarded with your above letter, have not earlier been known to us or co-ordinated in accordance with the now agreed procedure:

215 kc/s	Queen Elizabeth
221 kc/s	Queen Elizabeth
246 kc/s	Queen Elizabeth
255 kc/s	Queen Elizabeth
281 kc/s	Queen Elizabeth
298 kc/s	Charles Is.
308 kc/s	Grappling Is.
309 kc/s	Nottingham Is.
316 kc/s	Cape Acadia
316 kc/s	Cape Makkovik
320 kc/s	Ashe Inlet
324 kc/s	Swaffiel Hbr.

- 2 -

After examination of these assignments I can inform you that my administration has no objection to the use of these radiobeacons with characteristics as mentioned in the list.

With respect to the Beacon Hall Beach on 385 kc/s I shall, as mentioned in my earlier letter, revert to the matter as soon as possible.

Yours faithfully,

Hans Laursen

For the Director General.

I.T. 8748

5856-5 (SRE-B)

Hunter Building
Ottawa, Ontario

AIRMAIL

January 18, 1966

Director-General
General Directorate of Posts and Telegraphs
Ministry of Public Works
Tietgenagade 37
Copenhagen, Denmark

Dear Sir:

Co-ordination of Frequency Assignments in the Band 200-405 kc/s

Thank you for your letter of October 15, 1965 concerning a proposed informal arrangement between our Administrations for the co-ordination of frequencies for radiobeacons in the band 200-405 kc/s, applicable to certain areas of Canada and Greenland.

Regarding the co-ordination procedure outlined in my letter of September 11, 1964, this Administration agrees to all of the changes proposed in your letter of October 15, 1965. Since we have now reached agreement on the procedure to be followed, I would propose that this arrangement take effect on the date of receipt of this letter by your Administration. It is also proposed that the arrangement may be terminated when either Administration gives at least three months written notice to the other Administration.

As requested, I have enclosed a recapitulative list of Canadian radiobeacons located within the co-ordination zone.

I would like to receive confirmation that the final details outlined in this letter are satisfactory to your Administration.

Yours truly,

(F.G. Nixon),
Director,
Telecommunications and
Electronics Branch

Encl.

ANNEX

**EXISTING RADIOBEACON STATIONS IN
DESIGNATED AREAS OF NORTHERN CANADA**

(All stations are in area a) - those also in area b) shown by asterisk*)

Station	Co-ordinates	Frequency	Call Sign	Type of Emission	Power
Pelly Bay	68.27 N 89.45 W	201	UF	2.04A2	400
Cape Parry	70.10 N 124.44 W	203	UE	2.04A2	400
Knob Lake	54.50 N 66.50 W	203	KL	2.04A2	400
Slidre Bay	80.01 N 86.11 W	205	EU	2.04A2	100
Frobisher *	63.44 N 68.33 W	206	FY	2.04A2	3000
Clinton Point	69.35 N 120.48 W	209	UH	2.04A2	400
Mackar Inlet	68.18 N 85.40 W	212	UU	2.04A2	400
Jenny Lind	68.40 N 101.44 W	218	UQ	2.04A2	400
Raven	55.18 N 75.16 W	220	EZ	2.04A2	100
Retty	55.16 N 64.04 W	220	EF	2.04A2	100
Lady Franklin	68.29 N 113.13 W	227	UJ	2.04A2	400
Broughton *	67.33 N 63.49 W	230	VM	2.04A2	400
Mould Bay	76.20 N 119.50 W	230	MD	2.04A2	100
Hall Beach	68.45 N 81.14 W	239	UX	2.04A2	400
Cambridge Bay	69.07 N 105.01 W	245	CB	2.04A2	2000
Cape Dyer *	66.39 N 61.23 W	248	VN	2.04A2	400
Goose	53.17 N 60.21 W	257	YR	2.04A2	400
				6A3	
Rowley	69.03 N 79.02 W	257	UG	2.04A2	400
Cape Young	68.56 N 116.56 W	260	UI	2.04A2	400
Frobisher *	63.44 N 68.33 W	263	FB	2.04A2	400
				6A3	
Jamis	51.58 N 68.08 W	263	NK	2.04A2	400
Isachsen	78.50 N 103.50 W	265	IC	2.04A2	100
Byron Bay	68.45 N 109.04 W	272	UK	2.04A2	400
Cartwright	53.44 N 56.58 W	273	CA	2.04A2	400
Longstaff Bluff	68.54 N 75.10 W	275	UV	2.04A2	400
Frobisher *	63.45 N 68.31 W	278	TOWER	6A3	30
Advance	55.16 N 64.49 W	284	KE	2.04A2	100
Eagle	55.15 N 73.45 W	284	KY	2.04A2	100
Cape Hopes					
Advance *	61.05 N 69.33 W	285	HA	2.04A2	400
Cape Hooper *	68.26 N 66.44 W	287	UZ	2.04A2	400
Coral Harbour	64.08 N 83.13 W	290	ZS	2.04A2	400
				6A3	
Resolution Island *	61.20 N 64.53 W	292	DD	2.04A2	400
Gladman Point	68.40 N 97.49 W	300	UR	2.04A2	400
NW River (Goose)	53.29 N 60.05 W	300	RR	2.04A2	400
Resolution Island *	61.18 N 64.53 W	304	R	2.04A2	50

Station	Co-ordinates		Frequency	Call Sign	Type of Emission	Power
Brass	55.12 N	69.01 W	308	NJ	2.04A2	100
Burton	54.59 N	78.17 W	308	KE	2.04A2	100
Kivatee Lake *	67.57 N	64.55 W	309	JX	2.04A2	25
Dewar Lakes	68.41 N	71.15 W	315	UW	2.04A2	400
Frobisher *	63.43 N	68.27 W	315	F	2.04A2	25
Border	55.21 N	63.12 W	318	EC	2.04A2	100
Robin	55.15 N	72.12 W	318	EW	2.04A2	100
Shepherd Bay	68.49 N	93.26 W	321	US	2.04A2	400
Knob Lake	54.46 N	66.46 W	323	KR	2.04A2	400
Frobisher *	63.44 N	68.31 W	341	B	2.04A2	25
Cape Harrison	54.46 N	57.40 W	344	CP	2.04A2	400
Cape Christian *	70.34 N	68.23 W	350	CC	2.04A2	800
					6A3	
Gillespie	55.11 N	67.35 W	350	EH	2.04A2	100
Sparrow	55.16 N	76.47 W	350	KB	2.04A2	100
Bulldog	55.11 N	70.35 W	358	EQ	2.04A2	100
Cape Jones	54.38 N	79.45 W	358	KH	2.04A2	100
Harp Lake	55.19 N	61.50 W	358	IB	2.04A2	100
Saglek	58.29 N	62.35 W	360	SV	2.04A2	400
Coral Harbour	64.09 N	83.22 W	362	CZ	2.04A2	2000
Nitchequon	53.12 N	70.54 W	364	NI	2.04A2	400
					6A3	
Hopedale	55.29 N	60.15 W	367	HO	2.04A2	100
Great Whale River	55.17 N	77.45 W	371	GW	2.04A2	500
Coppermine	67.47 N	115.15 W	372	CO	2.04A2	400
Brevsort	63.21 N	64.10 W	377	BZ	2.04A2	400
Cambridge Bay	69.07 N	105.07 W	382	VK	2.04A2	400
Ft. Chime	58.03 N	68.30 W	390	VP	2.04A2	400
					6A3	
Resolute Bay	74.43 N	94.59 W	391	RU	2.04A2	100
Wabush	52.57 N	66.53 W	400	WK	2.04A2	500

KINGDOM OF DENMARK
MINISTRY OF PUBLIC WORKS

Date 15th October 1965

GENERAL DIRECTORATE OF
POSTS AND TELEGRAPHS

Tietgensgade 37² København V

1.T. No. 8748

Department of Transport
Hunter Building
Ottawa, Ontario
Canada

Co-ordination of Frequencies in the Band 200-405 kc/s

Ref. No.	Ref. date
5856-5	11.9.64
6801-439-1	
(SRE(B))	

Dear Sir,

With reference to your above letter concerning the agreement between our administrations as regards co-ordination of frequencies for radiobeacons in the frequency band 200-405 kc/s I have the honour to inform you that further consideration has been given to the definition of the co-ordination areas previously indicated.

I am now of opinion that it would be more convenient to let the co-ordination areas be determined by the service ranges of the radiobeacons to be co-ordinated rather than by the powers of the beacons, thus being in line with Article 7 of the *Radio Regulations*. I should therefore like to suggest that the following limits be applied:

- Area a) Radiobeacons with a service range of 100 km
- Area b) All radiobeacons
- Area c) Radiobeacons with a service range of 350 km

As to the geographical limits proposed by you in our previous correspondence it is found that these areas cover the most relevant parts of your territory and, consequently, I can agree to these areas, but as far as area b) is concerned I should prefer to include all of the Canadian territory north of 75 degrees north lying east of 125 degrees west. This minor change appears logical in view of the close location of the Greenland and Canadian territories in the farthest north.

- 2 -

Far as Greenland is concerned, I am quite prepared to co-ordinate all radiobeacons in the band under consideration in the area west of 35 degrees west, and for the remaining Greenland territory I will co-ordinate all radiobeacons having a service range of 350 km, or more.

I agree that endeavours should be made to apply a protection ratio of at least 15 db between the desired and the undesired signal at the extremity of the service range of the desired aeronautical or maritime radiobeacon.

The Danish Administration agrees to the suggestion made by you that routine co-ordination of assignments under this agreement could be handled by air-mail correspondence between our two Administrations. We agree that the Administration with which co-ordination is sought should acknowledge receipt of the co-ordination data within 30 days, and within a further period of 60 days should provide substantive comments on the matter. In the event that the Administration with which co-ordination is sought does not reply within 90 days, that Administration shall be assumed to agree with the assignment in question.

Among the Danish radiobeacons in Greenland previously agreed upon in our correspondence, some changes have occurred in the call signs in order to align these with the last two letters of the ICAO-location-indicators. Therefore, I enclose a revised list of existing and planned radiobeacons in Greenland as agreed, the changed call signs being included in the list.

I should like to receive your comments on the above suggestions concerning the co-ordination areas. If the suggested classification of the co-ordination areas according to service ranges is acceptable to you, I should like to receive from you a recapitulated list of Canadian radiobeacons in the band 200-405 kc/s with the service ranges indicated.

Yours faithfully,

Barge Nielsen

For the Director General

Frequency kc/s	Call Sign	Station and Location	Range km	Class of station	Type of emission
210	GD	Groennedal 48W06 61N14	55	AL	2.04A2
210	QS	Qutdligssat 52W51 70N03	55	AL	2.04A2
215	EM	Egedesminde 52W45 68N42	90	AL	2.04A2
219 +)	XMP 6	Narssarssuak 45W25 61N11	40	AL	6A3
222 +)	XPJ 8	Soendrestroemfjord 50W57 66N58	40	AL	6A3
228	NS	Narssaq 45W58 60N54	55	AL	2.04A2
234	RS	Ravns Stroe 50W25 62N43	90	AL NL	2.04A2
234	JN	Jakobshavn 51W03 69N13	55	AL	2.04A2
265	JH	Julianehaab 46W03 60N43	55	AL	2.04A2
265	CH	Christianshaab 51W05 68N49	55	AL	2.04A2
268 +)	QA	Qaqatoqaq 52W52 66N38	100	AL	2.04A2
270	NN	Nanortalik 45W13 60N08	55	AL NL	2.04A2
278 +)	XPB 5	Thule 69W00 76N30	40	AL	6A3
279 +)	SI	Simiutak 46W36 60N41	200	AL	0.1A1
283 +)	KK	Kulusuk 37W11 65N32	360	AL	2.04A2
290 +)	CL	Soendrestroemfjord 50W40 66N58	200	AL	2.04A2
298 +)	KU	Kookoeerne 52W00 64N02	270	AL NL	2.04A2

Frequency kc/s	Call Sign	Station and Location	Range km	Class of station	Type of emission
302		Chruncher Island 53W33 66N01	150	AL NL	
302	GH	Godthaab 51W45 64N10	55	AL	2.04A2
306	VE	Vester Eiland 53W24 68N37	270	NL	0.1A1
306	GN	Godhavn 53W31 69N14	270	AL	2.04A2
307	FD	Frederiksdal 44W38 60N01	90	NL	0.1A1
310	ST	Sukkertoppen 52W52 65N24	90	AL NL	2.04A2
314 +)	FN	Faeringehavn 51W33 63N42	55	AL	2.04A2
318 +)	AS	Angissoq 45W11 59N58	130	AL	2.04A2
328 +)	HB	Holsteinsborg 53W42 66N56	350	AL	0.1A1
331	FH	Frederikshaab 49W39 62N00	270	AL	2.04A2
335 +)	L	Thule 68W49 76N32	1000	AL	2.04A2
347	OYG	Mesters Vig 23W55 72N14	500	AL	0.1A1 2.1A2
354	UM	Umanak 52W00 70N40	90	AL	2.04A2
359 +)	NA	Narssarssuaq 45W23 61N10	100	AL	0.1A1
372 +)	OZN	Prins Christian Sund 43W10 60N04	350	AL	0.1A1

Frequency kc/s	Call Sign	Station and Location	Range km	Class of station	Type of emission
382 +)	SF	Soendrestroemfjord 50W57 66N58	1500	AL	2.04A2
396 +)	MV	Mestersvig 23W55 72N14	200	AL	2.1A2 6A3
399 +)	UP	Upernavik 56W09 72N48	350	AL	0.1A1
404 +)	NO	Nord 16W40 81N36	350	AL	0.1A1

Frequencies marked +) are in use.

5856-5
6801-439-1 (SRE(B))

Hunter Building
Ottawa, Ontario

AIRMAIL

September 11, 1964

Director-General
General Directorate of Posts and Telegraphs
Ministry of Public Works
Tietgensgade 37
Copenhagen
Denmark

Dear Sir:

Coordination of Frequency Assignments in the Band 200-405 kc/s

This refers to my letter of October 17, 1962 and your reply of July 21, 1964, reference 1.T. No. 6514 concerning a proposed arrangement between our two Administrations for the coordination of existing and planned radiobeacon assignments in the bands between 200 and 405 kc/s in adjacent areas of Canada and Greenland. We are pleased to note your agreement to the existing radiobeacon assignments in designated areas of northern Canada, as contained in the annex to our letter of October 17, 1962, also your concurrence in the protection ratio of 15 dB.

With regard to the limits of the coordination area proposed in my letter, these were considered adequate to provide good protection to radiobeacon assignments in the Arctic area. However, your suggestion to co-ordinate high power radiobecons in a more distant area of Canada has considerable merit, assuming that your Administration is prepared to take equivalent action with respect to radiobecons in Greenland.

Noting your agreement in principle to the limits of Area a) - (100 watts or more) and Area b) - (25 watts or more) suggested in my letter of October 17, 1962, I would like to propose a third coordination area south of 52 degrees North, to include the southern half of the Province of Quebec, all of New Brunswick and Newfoundland and the northern half of Nova Scotia, as follows:

- Area c) From the North Pole southward along meridian 55°W to its intersection with parallel 52°N, thence westward to its intersection with meridian 80°W, thence southward to its intersection with parallel 45°N, thence eastward to its intersection with meridian 52°W, thence northward along meridian 52°W to the North Pole.

- 2 -

In Area c) there are no existing Canadian radiobeacons in the bands between 200 and 405 kc/s having a power of 1000 watts or more. We propose to supply particulars of any planned Canadian radiobeacon assignments in the 200-405 kc/s band in Area c) where the peak power is 1000 watts or more.

In the matter of bi-lateral action, it would be helpful for us to have particulars of **all** radiobeacons in the band 200-405 kc/s in adjacent areas of Greenland, in order to assist our planning and to provide the best possible protection to your low-power stations. Therefore, it is suggested for your consideration, that coordination with this Administration be sought for **all** 200-405 kc/s radiobeacon assignments in Greenland west of meridian 35°W regardless of power, and for all such assignments east of meridian 35°W involving transmitter power of 1000 watts or more.

In carrying out coordination under this arrangement each Administration would recognize the sovereign right of the other to regulate its use of the radio spectrum, and each would not necessarily be bound by the views of the other. Nevertheless, in keeping with the spirit of international cooperation, this Administration is prepared to take immediate action to alleviate actual cases of interference to radiobeacons in Greenland in the 200-405 kc/s band caused by Canadian assignments, regardless of the power or location of the Canadian stations involved.

It is considered that routine coordination of assignments under this Arrangement could be handled by air mail correspondence between our two Administrations. It is suggested that the Administration with which coordination is sought should acknowledge receipt of the coordination data within 30 days, and within a further period of 60 days should provide substantive comments on the matter. In the event that the Administration with which coordination is sought does not reply within 90 days, that Administration shall be assumed to agree with the assignment in question.

I would appreciate receiving your early comments on the contents of this letter, and any other suggestions regarding our proposed coordination arrangement.

Yours truly,

(F.G. Nixon)
Director
Telecommunications and
Electronics Branch

5856-5
6801-439-1

AIRMAIL

Ottawa, October 17, 1962

Director General
General Directorate of Posts and Telegraphs
Ministry of Public Works
Tietgensgade 37
Copenhagen
Denmark

Dear Sir:

I would refer to your letter of April 12, 1962, reference 1.T. No. 2992, concerning interference to the maritime radiobeacon Koak-erne (Greenland) operating on 314 kc/s with a service range of 50 n.m., caused by Canadian radiobeacon FY at Frobisher Bay, operating on 315 kc/s with a service range of 200 n.m. It is believed that this problem will be satisfactorily resolved by our proposal to change Frobisher Bay radiobeacon FY from 315 kc/s to 206 kc/s, conveyed to you in our telegram of September 5, 1962, and agreed to in your telegram of September 10, 1962.

I regret the delay in replying to this remaining paragraphs of your letter, which propose an administrative arrangement between our two Administrations for the co-ordination of existing and planned radiobeacon frequency assignments in the bands between 200 and 405 kc/s for adjacent areas of northern Canada and Greenland. I thank you for the particulars of planned and existing radiobeacons (200-405 kc/s) in Greenland, contained in Annexes 1 and 2 of your letter. These particulars have been examined in relation to existing and planned radiobeacons in northern Canada and we anticipate no interference from the radiobeacons in question.

In the matter of a continuing arrangement between our two Administrations for the co-ordination of frequency assignments for radiobeacons in the bands between 200 and 405 kc/s, it is believed that such an arrangement would be to our mutual advantage and could be brought into effect by a continuation of this exchange of correspondence.

This matter has been studied in some detail and, noting that you have supplied particulars of existing and proposed radiobeacons in Greenland, I now propose to supply similar details for adjacent areas of northern Canada, as follows:

- 2 -

Area a) From the North Pole southward along meridian 125°W to its intersection with the Arctic Circle, thence eastward along the Arctic Circle to its intersection with 80°W, thence southward along meridian 80°W to its intersection with parallel 52°W, thence eastward along parallel 52°W to its intersection with 55°W, thence northward along meridian 55°W to the North Pole.

Area b) From the North Pole southward along meridian 70°W to its intersection with parallel 60°W, thence eastward along parallel 60°N to its intersection with 55°W, thence northward along meridian 55°W to the North Pole.

In the case of Area a), we propose to supply particulars of existing and planned radiobeacons within the band 200-405 kc/s having a peak envelope power (Pp), as defined in Article 1, No. 95 of the Geneva *Radio Regulations*, of 100 watts or more; and in the case of Area b), those having a Pp of 25 watts or more.

A list of existing radiobeacons having the specified powers within the designated areas is contained in the Annex to this letter. The list is complete as of this date and we propose to provide your Administration with similar details of any planned radiobeacon assignments in these areas, on a continuing basis, in order to effect co-ordination of such assignments prior to their actual implementation. It is assumed that details of planned radiobeacons in Greenland will also be provided by your Administration on a continuing basis, for co-ordination purposes. In carrying out such co-ordination, each country would recognize the sovereign right of the other country to regulate its use of radio frequencies, and each would not necessarily be bound by the views of the other.

In Canada, the daylight service range of aeronautical radiobeacons is based on a minimum field strength of 70 micovolts per meter, in accordance with the recommendations of the International Civil Aviation Organization. In the case of maritime radiobeacons, the daylight service range is based on a minimum field strength of 50 microvolts per meter, pursuant to Article 7 No. 461 of the ITU *Radio Regulations* (Geneva, 1959). With regard to protection ratios, the Geneva *Radio Regulations* (Article 7 No. 433) provide, in the case of aeronautical radiobeacons, a ratio of at least 10 dB for each beacon throughout its service area. In Canada, we endeavour to provide a protection ratio of at least 15 dB between the undesired and desired signal at the extremity of the service range of the desired signal, for all aeronautical and maritime beacons. Perhaps your Administration could agree to these values, for frequency co-ordination purposes.

- 3 -

The foregoing tentative proposals are submitted as a basis for further discussion. We are prepared to give careful consideration to the exchange of information additional to that contained in the Annex to this letter for radiobeacons operating in the bands between 200 and 405 kc/s, including any suggestions you may have as to amended power levels, co-ordination areas, interference ratios, etc. I would appreciate receiving your comments on this matter at your convenience.

Yours truly,

(F.G. Nixon)
Director
Telecommunications
and Electronics Branch

Attachment