L(1) Limitation to protect CJBR-TV-1, Edmundston, N.B.

L(2) Limitation of 20 dBk at 305 m (1000 ft) EHAAT.

L(3) Limitation to protect CBFT Montreal, P.Q. signal at Canada-U.S.A. border.

L(4) Limited to 100 kW maximum ERP and 305 m (1000 feet) EHAAT, or the equivalent, in the general direction of Brandon, Manitoba.

L(5) Limitation of 25 dBk at 427 m (1400 feet) without prejudice to future location of Winnipeg Ch. 13 assignment.

L(1) Limitation pour protéger CJBR-TV-1, Edmundston (N.-B.).

L(2) Limitations: 20 dBk et 305 m (1000 pieds) HEASM.

L(3) Limitation pour protéger les signaux de CBFT, Montréal (Qué.), à la frontière canado-américaine.

L(4) Limitation de 100 kW de puissance rayonnée maximale et de 305 m (1000 pieds) HEASM ou l'équivalent, en direction générale de Brandon (Man

L(5) Limitation de 25 dBk à 427 m (1400 pieds) sans nuire à la location future de l'assignation du canal 13 à Winnipeg.

Before the
Federal Communications Commission
Washington, D.C. 20554

PUBLIC NOTICE 92-160

Released: April 19,1989

COORDINATION OF ASSIGNMENTS IN THE 2500-2686 MHZ BAND WITHIN 80 KM OF THE UNITED STATES OF AMERICA/CANADA BORDER

On March 23, 1989, a general understanding on coordinating assignments in the 2500-2686 MHz band along the United States of America / Canada border was signed by the Federal Communications Commission and the Department of Communications of Canada.

The understanding, which is attached, provides that assignments / stations meeting certain technical requirements will not require coordination. Rather, only notification of the use of the assignment will be necessary. Notification will reduce the time required to process applications on both sides of the border. Application for stations that do not meet the stipulated technical requirements will continue to be subject to the full coordination process. Applicants for stations within 80 km of the border must indicate whether or not they comply with the technical requirements of the understanding. Those claiming compliance must demonstrate such in their application.

The Commission intends to institute a rule making proceeding to amend Rules Parts 21, 74 and 94 to reflect this understanding.

For further information, contact Donald Draper Campbell, of the Office of Engineering and Technology, at (202) 653-8113.

FEDERAL COMMUNICATIONS COMMISSION

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ATTACHMENT

General FCC/DOC understanding concerning the coordination of the 2500-2686 MHz band within 80 km (50 miles) of the United States of America / Canada border

This document describes a general understanding between the Federal Communications Commission (FCC), USA, and the Department of Communications (DOC), Canada, concerning the mutual use of the 2500-2686 MHz band within 80 km of the United States of America / Canada border. This understanding is based upon the following technical principles.

1. Both FCC and DOC agree that both administrations should have access to the full 31 channels of the 2500-2686 MHz band (see TABLE 1) whenever practical.

2. Initially both FCC and DOC will endeavor to avoid co-channel assignment of frequencies to the greatest extent possible. Timely notification of proposed technical operating parameters to the other administration for information purposes is required for all assignments within 80 km of the border.

3. Both FCC and DOC agree to require the use of cross-polarization for assignments within 80 km of the border. In general, the United States assignments shall use horizontal polarization of the electric field and Canadian assignments shall use vertical polarization of the electric field.

4. Both FCC and DOC agree to require the use of non-precision frequency offsets for assignments within 50 km of the border. The United States assignments shall operate on the nominal channel frequencies. Canadian assignments shall use the nominal channel frequencies ± 10 kHz. The frequency tolerance for non-precision offset shall be within ± 500 Hz.

5. Both FCC and DOC agree that a reference receive antenna pattern for coordination purposes shall be based on the following values -- Nominal gain: 22 dBi; 3 dB beamwidth: 12^0; Front-to-back ratio: 28 dB; Boresight cross-polarization: 26 dB; 180^0 cross-polarization: 35 dB. (See FIGURE 1.)

6. Both FCC and DOC agree to establish a power flux density (pfd) of -70 dBw/m^2 as the coordination threshold at the border. Computation of the pfd shall be based on free space calculation. If the -70 dBw/m^2 threshold is not exceeded and the technical parameters specified in paragraphs 3 and 4 are observed, coordination of such assignments within 80 km of the border would not be required. However, notification of operating parameters of such assignments should be done in a timely manner, see (2) above.

7. Both FCC and DOC agree that in any area where the pfd limit or the above parameters are not observed, an administration may, after coordination, assign up to a maximum of 12 channels provided no harmful interference is caused to any existing assignments across the border. Each administration should attempt to minimize the pfd spillover across the border on these channels in order to increase the possibility of spectrum usage by the other administration. Beyond this channel threshold, the above pfd and technical parameters shall be observed on the remaining channels unless other coordination arrangements have been agreed upon in specific cases.

8. Both FCC and DOC agree that the above conditions shall not apply to stations listed in ANNEX A.

9. Both FCC and DOC agree that these principles should be reviewed within 2 years from the date of the understanding.

10. Both FCC and DOC agree that for the Buffalo/St. Catherines-Niagara Falls and Bellingham/Vancouver areas; additional technical consideration other than those noted above may be required. To this end, discussions will start immediately. Until these discussions are concluded, coordination requests for the Buffalo/St. Catherines-Niagara Falls and Bellingham/Vancouver areas will not be processed unless such requests meet the technical parameters and pfd limits specified in paragraphs 3, 4, and 6. For Detroit/Windsor Metropolitan areas, refer to Annex B.

Robert A. Gordon
Assistant Deputy Minister
Spectrum Management and
Regional Operations
Department of
Communications

Thomas P. Stanley
Chief Engineer
Office of Engineering
and Technology
Federal Communications
Commission

ANNEX B

Provisions concerning usage in the Detroit/Windsor metropolitan areas

- Stations using channel groups A, B, C, and D, and channels G-3 and G-4 in the Detroit area shall be located at the Motower Building (42N2713, 083W0950), utilize horizontal polarization, and comply with all the other requirements of the Understanding.

- Stations using channel groups E, F, and H, and channels G-1 and G-2 in the Detroit area shall be located at the Renaissance Building (42N1945, 083W0225), utilize vertical polarization, and comply with all the other requirements of the Understanding.

- Stations using channel groups A, B, C, D, E, F, G, and H in the Windsor area shall use polarization opposite to that used by the corresponding channels assigned to the stations in the Detroit area and comply with all other requirements of the Understanding.

Channel Designator	Frequency (MHz)
A-1	2500 - 2506
B-1	2506 - 2512
A-2	2512 - 2518
B-2	2518 - 2524
A-3	2524 - 2530
B-3	2530 - 2536
A-4	2536 - 2542
B-4	2542 - 2548
C-1	2548 - 2554
D-1	2554 - 2560
C-2	2560 - 2566
D-2	2566 - 2572
C-3	2572 - 2578
D-3	2578 - 2584
C-4	2584 - 2590
D-4	2590 - 2596
E-1	2596 - 2602
F-1	2602 - 2608
E-2	2608 - 2614
F-2	2614 - 2620
E-3	2620 - 2626
F-3	2626 - 2632
E-4	2632 - 2638
F-4	2638 - 2644
G-1	2644 - 2650
H-1	2650 - 2656
G-2	2656 - 2662
H-2	2662 - 2668
G-3	2668 - 2674
H-3	2674 - 2680
G-4	2680 - 2686

TABLE 1: List of Channel Designator and Frequencies.

ANNEX A

List of United States Assignments

Call Sign	Freq (MHz)	Lat	Lon	City	St	BW/EM	P	Tx Pwr (W)	Ant Gain	Beam-width	Azmuth	Gnd ft	Ant ft
WLK358	2599	454024	684308	Millinocket	ME	5M75C3F	H	10.000	0.00	360.0	0.0	450	170
WLK358	2611	454024	684308	Millinocket	ME	5M75C3F	H	10.000	0.00	360.0	0.0	450	170
WLK358	2623	454024	684308	Millinocket	ME	5M75C3F	H	10.000	0.00	360.0	0.0	450	170
WLK358	2635	454024	684308	Millinocket	ME	5M75C3F	H	10.000	0.00	360.0	0.0	450	170
WBK219	2503	444140	732756	Plattsburgh	NY	5M75C3F	V	10.000	18.90	140.0	230.0	175	135
WHR700	2659	443634	750957	Canton	NY	5M75C3F	H	10.000	28.00	0.0	205.4	425	178
WHR699	2671	441943	751505	Edwards	NY	5M75C3F	V	10.000	31.40	0.0	235.5	650	187
WHR703	2683	440930	751915	Harrisville	NY	5M75C3F	V	10.000	28.00	0.0	329.5	780	138
WHR701	2503	441511	752259	Balmat	NY	5M75C3F	H	10.000	12.70	360.0	0.0	840	182
WHR701	2503	441511	752259	Balmat	NY	5M75C3F	V	10.000	28.00	0.0	25.3	840	178
WHR701	2515	441511	752259	Balmat	NY	5M75C3F	H	10.000	12.70	360.0	0.0	840	182
WHR701	2515	441511	752259	Balmat	NY	5M75C3F	V	10.000	28.00	0.0	25.3	840	178
WHR701	2527	441511	752259	Balmat	NY	5M75C3F	H	10.000	12.70	360.0	0.0	840	182
WHR701	2527	441511	752259	Balmat	NY	5M75C3F	V	10.000	28.00	0.0	25.3	840	178
WHR701	2539	441511	752259	Balmat	NY	5M75C3F	H	10.000	12.70	360.0	0.0	840	182
WHR701	2539	441511	752259	Balmat	NY	5M75C3F	V	10.000	28.00	0.0	25.3	840	178
WHR698	2647	442029	752756	Gouverneur	NY	5M75C3F	V	10.000	28.00	0.0	151.5	450	172
KRV45	2557	430933	773348	Rochester	NY	5M75C3F	H	10.000	13.00	360.0	0.0	463	270
KRV45	2581	430933	773348	Rochester	NY	5M75C3F	H	10.000	13.00	360.0	0.0	463	270
KRV45	2569	430953	773348	Rochester	NY	5M75C3F	H	10.000	13.00	360.0	0.0	463	270
WAX30	2503	430514	774032	Rochester	NY	5M75C3F	H	10.000	15.00	0.0	45.0	536	132
WDG55	2647	425720	784901	Buffalo	NY	5M75C3F	H	10.000	13.00	360.0	0.0	690	150
WDG55	2659	425720	784901	Buffalo	NY	5M75C3F	H	10.000	13.00	360.0	0.0	690	150
WDG55	2671	425720	784901	Buffalo	NY	5M75C3F	H	10.000	13.00	360.0	0.0	690	150
WDG55	2683	425720	784901	Buffalo	NY	5M75C3F	H	10.000	13.00	360.0	0.0	690	150
KWE21	2503	425856	785137	Kenmore	NY	5M75C3F	H	1.000	13.00	360.0	0.0	600	120
KWE21	2515	425856	785137	Kenmore	NY	5M75C3F	H	1.000	13.00	360.0	0.0	600	120
WAQ310	2551	422508	791840	Fredonia	NY	5M75C3F	H	10.000	11.20	220.0	300.0	860	180
WAQ310	2551	422508	791840	Fredonia	NY	5M75C3F	V	10.000	27.00	0.0	229.0	860	170
WHN700	2509	415139	804046	Gageville	OH	5M75C3F	H	10.000	15.70	360.0	0.0	870	360
WHR450	2659	412728	812934	Beachwood	OH	5M75C3F	H	10.000	13.00	360.0	0.0	1195	365
WHR450	2683	412728	812934	Beachwood	OH	5M75C3F	H	10.000	13.00	360.0	0.0	1195	365
WHR675	2563	413000	814058	Cleveland	OH	5M75C3F	V	1.000	31.40	0.0	106.0	680	68
WHR675	2587	413000	814058	Cleveland	OH	5M75C3F	V	1.000	31.40	0.0	106.0	680	68
WHK375	2653	412959	814109	Cleveland	OH	5M75C3F	V	10.000	16.00	360.0	0.0	677	383
WGM96	2629	412144	814156	Parma	OH	5M75C3F	H	1.000	31.00	0.0	311.0	1122	35
KNZ60	2503	412302	814206	Parma	OH	5M75C3F	H	50.000	9.40	360.0	0.0	1020	600
WAJ20	2509	412302	814206	Parma	OH	5M75C3F	H	50.000	9.40	360.0	0.0	1020	600
WAJ20	2515	412302	814206	Parma	OH	5M75C3F	H	50.000	9.40	360.0	0.0	1020	600
WAJ20	2521	412302	814206	Parma	OH	5M75C3F	H	50.000	9.40	360.0	0.0	1020	600
WAJ20	2527	412302	814206	Parma	OH	5M75C3F	H	50.000	9.40	360.0	0.0	1020	600
WAJ20	2533	412302	814206	Parma	OH	5M75C3F	H	50.000	9.40	360.0	0.0	1020	600
WAJ20	2539	412302	814206	Parma	OH	5M75C3F	H	50.000	9.40	360.0	0.0	1020	600
WAJ20	2545	412302	814206	Parma	OH	5M75C3F	H	50.000	9.40	360.0	0.0	1020	600
WAJ20	2551	412302	814206	Parma	OH	5M75C3F	H	50.000	9.40	360.0	0.0	1020	600
WAJ20	2563	412302	814206	Parma	OH	5M75C3F	H	50.000	9.40	360.0	0.0	1020	600
WAJ20	2575	412302	814206	Parma	OH	5M75C3F	H	50.000	9.40	360.0	0.0	1020	600

ANNEX A, con't

List of United States Assignments

Call Sign	Freq (MHz)	Lat	Lon	City	St	BW/EM	P	Tx Pwr (W)	Ant Gain	Beam-width	Azmuth	Gnd ft	Ant ft
WAJ20	2587	412302	814206	Parma	OH	5M75C3F	H	50.000	9.40	360.0	0.0	1020	600
WHJ951	2665	412302	814206	Parma	OH	5M75C3F	H	10.000	10.10	360.0	0.0	1020	600
WHR776	2557	412302	814206	Parma	OH	5M75C3F	H	10.000	15.70	360.0	0.0	1020	604
WHR776	2569	412302	814206	Parma	OH	5M75C3F	H	10.000	15.70	360.0	0.0	1020	604
WHR776	2581	412302	814206	Parma	OH	5M75C3F	H	10.000	15.70	360.0	0.0	1020	604
WHR776	2593	412302	814206	Parma	OH	5M75C3F	H	10.000	15.70	360.0	0.0	1020	604
WLK306	2605	412302	814206	Parma	OH	5M75C3F	H	10.000	0.00	360.0	0.0	1020	600
WLK306	2617	412302	814206	Parma	OH	5M75C3F	H	10.000	0.00	360.0	0.0	1020	600
WLK306	2629	412302	814206	Parma	OH	5M75C3F	H	10.000	0.00	360.0	0.0	1020	600
WLK306	2641	412302	814206	Parma	OH	5M75C3F	H	10.000	0.00	360.0	0.0	1020	600
WLK310	2599	412302	814206	Parma	OH	5M75C3F	H	10.000	0.00	360.0	0.0	1020	600
WLK310	2611	412302	814206	Parma	OH	5M75C3F	H	10.000	0.00	360.0	0.0	1020	600
WLK310	2623	412302	814206	Parma	OH	5M75C3F	H	10.000	0.00	360.0	0.0	1020	600
WLK310	2635	412302	814206	Parma	OH	5M75C3F	H	10.000	0.00	360.0	0.0	1020	600
KA88717	2659	412218	814248	Cleveland	OH	5M75C3F	H	0.000	0.00	0.0	0.0	0	0
KDX68	2599	412510	814254	Cleveland	OH	5M75C3F	V	1.000	27.00	0.0	175.0	790	80
KDX68	2611	412510	814254	Cleveland	OH	5M75C3F	V	1.000	27.00	0.0	175.0	790	80
KDX68	2623	412510	814254	Cleveland	OH	5M75C3F	V	1.000	27.00	0.0	175.0	790	80
KDX68	2635	412510	814254	Cleveland	OH	5M75C3F	V	1.000	27.00	0.0	175.0	790	80
KDX68	2647	412510	814254	Cleveland	OH	5M75C3F	H	1.000	27.00	0.0	175.0	790	80
KDX68	2659	412510	814254	Cleveland	OH	5M75C3F	H	1.000	27.00	0.0	175.0	790	80
KDX68	2671	412510	814254	Cleveland	OH	5M75C3F	H	1.000	27.00	0.0	175.0	790	80
KHR35	2677	412447	815004	Cleveland	OH	5M75C3F	V	0.002	26.00	6.5	203.0	792	56
WHR777	2647	412448	820421	Elyria	OH	5M75C3F	V	10.000	18.20	0.0	270.0	697	291
WHR777	2659	412448	820421	Elyria	OH	5M75C3F	V	10.000	18.20	0.0	270.0	697	291
WHR777	2671	412448	820421	Elyria	OH	5M75C3F	V	10.000	18.20	0.0	270.0	697	291
WHR777	2683	412448	820421	Elyria	OH	5M75C3F	V	10.000	18.20	0.0	270.0	697	291
WHR517	2569	412157	820552	Elyria	OH	5M75C3F	V	10.000	13.00	360.0	0.0	725	210
WHR517	2593	412157	820552	Elyria	OH	5M75C3F	V	10.000	13.00	360.0	0.0	725	210
WHR610	2557	425938	824336	Emmett	MI	5M75C3F	H	10.000	14.00	360.0	0.0	760	298
WHR610	2569	425938	824336	Emmett	MI	5M75C3F	H	10.000	14.00	360.0	0.0	760	298
WHR610	2581	425938	824336	Emmett	MI	5M75C3F	H	10.000	14.00	360.0	0.0	760	298
WHR629	2647	425937	824348	Emmett	MI	5M75C3F	V	10.000	15.70	360.0	0.0	760	300
WHR629	2659	425937	824348	Emmett	MI	5M75C3F	V	10.000	15.70	360.0	0.0	760	300
WHR616	2509	412142	824525	Castalia	OH	5M75C3F	V	10.000	13.00	360.0	0.0	725	147
WHR616	2533	412142	824525	Castalia	OH	5M75C3F	V	10.000	13.00	360.0	0.0	725	147
WHR668	2599	412242	831317	Fremont	OH	5M75C3F	H	10.000	31.50	0.0	92.7	655	250
WHR668	2623	412242	831317	Fremont	OH	5M75C3F	H	10.000	31.50	0.0	92.7	655	250
WHR668	2599	412242	831317	Fremont	OH	5M75C3F	H	10.000	14.00	150.0	112.5	630	250
WHR668	2623	412242	831317	Fremont	OH	5M75C3F	H	10.000	14.00	150.0	112.5	630	250
WHR722	2509	413927	832555	Toledo	OH	5M75C3F	V	10.000	16.00	220.0	270.0	594	394
WHR722	2521	413927	832555	Toledo	OH	5M75C3F	V	10.000	16.00	220.0	270.0	594	394
WHR722	2533	413927	832555	Toledo	OH	5M75C3F	V	10.000	16.00	220.0	270.0	594	394
WHR722	2545	413927	832555	Toledo	OH	5M75C3F	V	10.000	16.00	220.0	270.0	594	394

ANNEX A, con't

List of United States Assignments

Call Sign	Freq (MHz)	Lat	Lon	City	St	BW/EM	P	Tx Pwr (W)	Ant Gain	Beam-width	Azmuth	Gnd ft	Ant ft
WHR924	2533	424620	832758	Springfield Twp	MI	5M75C3F	H	10.000	12.70	360.0	0.0	1100	285
WHR924	2545	424620	832758	Springfield Twp	MI	5M75C3F	H	10.000	12.70	360.0	0.0	1100	285
WHR633	2509	423455	833634	Milford	MI	5M75C3F	V	10.000	12.70	360.0	0.0	940	292
WHR633	2521	423455	833634	Milford	MI	5M75C3F	V	10.000	12.70	360.0	0.0	940	292
WHR617	2509	412221	833830	Bowling Green	OH	5M75C3F	H	10.000	14.00	180.0	86.0	693	151
WHR617	2533	412221	833830	Bowling Green	OH	5M75C3F	H	10.000	14.00	180.0	86.0	693	151
WHR550	2503	413730	833920	Toledo	OH	5M75C3F	H	10.000	15.70	360.0	0.0	625	363
WHR550	2515	413730	833920	Toledo	OH	5M75C3F	H	10.000	15.70	360.0	0.0	625	363
WHR550	2527	413730	833920	Toledo	OH	5M75C3F	H	10.000	15.70	360.0	0.0	625	363
WHR550	2539	413730	833920	Toledo	OH	5M75C3F	H	10.000	15.70	360.0	0.0	625	363

NOTES: Antenna pattern/beamwidth: 31.0 dBi gain -> 4.4^0 beamwidth
28.0 dBi gain -> 6.3^0 beamwidth

ANNEX A, con't

List of Canadian Assignments

Freq (MHz)	Lat	Lon	City	PR	BW/EM	P	Tx Pwr (W)	Ant Gain	Azmuth	Gnd ft	Ant ft
2605.00	433947	800343	Action	ON	6M00J8FNF	H	100.0	13.0	OMNI	1436	1360
2593.00	495912	811408	London	ON	5250A5C	H	10.0	9.0	OMNI	1120	820
2581.00	495912	811408	London	ON	750FE	H	10.0	9.0	OMNI	1120	820
2690.00	541256	1292386	McLean Mtm	BC	18344F9		2.5	38.8	280	3830	3700
2557.00	493343	970534	Niverville	MB	6M00C3FNN		5.0	16.7	55/145	917	767
2569.00	493343	970534	Niverville	MB	6M00C3FNN		5.0	16.7	55/145	917	767
2581.00	493343	970534	Niverville	MB	6M00C3FNN		5.0	16.7	55/145	917	767
2587.00	493343	970534	Niverville	MB	6M00C3FNN		5.0	16.7	55/145	917	767
2593.00	493343	970534	Niverville	MB	6M00C3FNN		5.0	16.7	55/145	917	767
2599.00	493343	970534	Niverville	MB	6M00C3FNN		5.0	16.7	55/145	917	767
2605.00	493343	970534	Niverville	MB	6M00C3FNN		5.0	16.7	55/145	917	767
2611.00	493343	970534	Niverville	MB	6M00C3FNN		5.0	16.7	55/145	917	767
2503.00	452258	754159	Ottawa	ON	6M00J8FNF	H	1.0	31.0	219/74	459	235
2587.25	452258	754159	Ottawa	ON	6000A5CF3	H	1.0	31.0	32	466	235
2627.25	452258	754159	Ottawa	ON	6000A5CF3	H	1.0	31.0	220	466	235
2570.00	502646	1041837	Regina	SK	18030F9		2.4	40.8	323.17	2122	1928
2557.00	435325	792343	Toronto	ON	6M00J8FNF		10.0	17.2	OMNI	1080	530
2599.00	435325	792343	Toronto	ON			10.0				
2605.00	435325	792343	Toronto	ON	6M00J8FNF	H	10.0	17.2	OMNI	1080	530
2575.00	495312	971606	Winnipeg	MB	6M00J8FNF	H	10.0	8.2	OMNI	872	770
2587.00	495312	971606	Winnipeg	MB	6000A5CF3		2.9	9.6	OMNI	820	790

3-24-89

General FCC/DOC understanding concerning the coordination of the 2500-2686 MHz band within 80 km (50 miles) of the United States of America / Canada border

This document describes a general understanding between the Federal Communications Commission (FCC), USA, and the Department of Communications (DOC), Canada, concerning the mutual use of the 2500-2686 MHz band within 80 km of the United States of America / Canada border. This understanding is based upon the following technical principles.

1. Both FCC and DOC agree that both administrations should have access to the full 31 channels of the 2500-2686 MHz band (see TABLE 1) whenever practical.

2. Initially both FCC and DOC will endeavor to avoid co-channel assignment of frequencies to the greatest extent possible. Timely notification of proposed technical operating parameters to the other administration for information purposes is required for all assignments within 80 km of the border.

3. Both FCC and DOC agree to require the use of cross-polarization for assignments within 80 km of the border. In general, the United States assignments shall use horizontal polarization of the electric field and Canadian assignments shall use vertical polarization of the electric field.

4. Both FCC and DOC agree to require the use of non-precision frequency offsets for assignments within 50 km of the border. The United States assignments shall operate on the nominal channel frequencies. Canadian assignments shall use the nominal channel frequencies ±10 kHz. The frequency tolerance for non-precision offset shall be within ±500 Hz.

5. Both FCC and DOC agree that a reference receive antenna pattern for coordination purposes shall be based on the following values — Nominal gain: 22 dBi; 3 dB beamwidth: 12°; Front-to-back ratio: 28 dB; Boresight cross-polarization: 26 dB; 180° cross-polarization: 35 dB. (See FIGURE 1.)

6. Both FCC and DOC agree to establish a power flux density (pfd) of -70 dBw/m^2 as the coordination threshold at the border. Computation of the pfd shall be based on free space calculation. If the -70 dBw/m^2 threshold is not exceeded and the technical parameters specified in paragraphs 3 and 4 are observed, coordination of such assignments within 80 km of the border would not be required. However, notification of operating parameters of such assignments should be done in a timely manner, see (2) above.

7. Both FCC and DOC agree that in any area where the pfd limit or the above parameters are not observed, an administration may, after coordination, assign up to a maximum of 12 channels provided no harmful interference is caused to any existing assignments across the border. Each administration should attempt to minimize the pfd spillover across the border on these channels in order to increase the possibility of spectrum usage by the other administration. Beyond this channel threshold, the above pfd and technical parameters shall be observed on the remaining channels unless other coordination arrangements have been agreed upon in specific cases.

8. Both FCC and DOC agree that the above conditions shall not apply to stations listed in ANNEX A.

9. Both FCC and DOC agree that these principles should be reviewed within 2 years from the date of the understanding.

10. Both FCC and DOC agree that for the Buffalo/St. Catherines-Niagara Falls and Bellingham/Vancouver areas, additional technical consideration other than those noted above may be required. To this end, discussions will start immediately. Until these discussions are concluded, coordination requests for the Buffalo/St. Catherines-Niagara Falls and Bellingham/Vancouver areas will not be processed unless such requests meet the technical parameters and pfd limits specified in paragraphs 3, 4, and 6. For Detroit/Windsor Metropolitan areas, refer to Annex B.

Robert A. Gordon
Assistant Deputy Minister
Spectrum Management and
Regional Operations
Department of Communications

Thomas P. Stanley
Chief Engineer
Office of Engineering
and Technology
Federal Communications
Commission

Dated: 23 March 1989

Channel Designator	Frequency (MHz)
A-1	2500 - 2506
B-1	2506 - 2512
A-2	2512 - 2518
B-2	2518 - 2524
A-3	2524 - 2530
B-3	2530 - 2536
A-4	2536 - 2542
B-4	2542 - 2548
C-1	2548 - 2554
D-1	2554 - 2560
C-2	2560 - 2566
D-2	2566 - 2572
C-3	2572 - 2578
D-3	2578 - 2584
C-4	2584 - 2590
D-4	2590 - 2596
E-1	2596 - 2602
F-1	2602 - 2608
E-2	2608 - 2614
F-2	2614 - 2620
E-3	2620 - 2626
F-3	2626 - 2632
E-4	2632 - 2638
F-4	2638 - 2644
G-1	2644 - 2650
H-1	2650 - 2656
G-2	2656 - 2662
H-2	2662 - 2668
G-3	2668 - 2674
H-3	2674 - 2680
G-4	2680 - 2686

TABLE 1: **List of Channel Designator and Frequencies.**

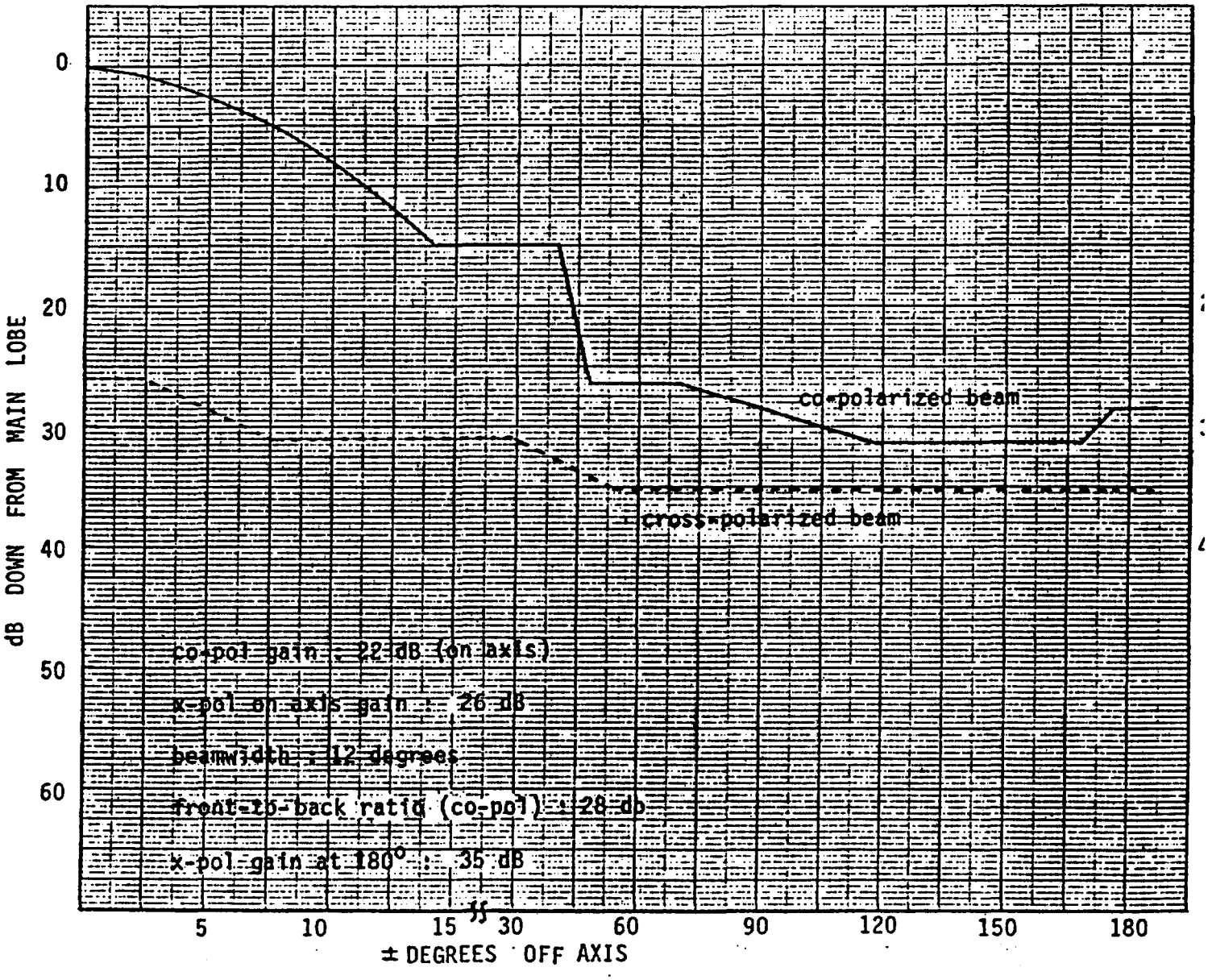

FIGURE 1: REFERENCE RECEIVER ANTENNA PATTERN

ANNEX A

LIST OF CANADIAN ASSIGNMENTS

FREQUENCY	LAT	LONG	NAME	STATE_PROV	EMISSION	POLARIZ	POWER	GAIN	AZIMUTH	ANT_HT	GROUND
2605.0000	433947	0800343	ACTON	O	6M00J8FNF	H	100.0	13.0	OMNI	1436	1360
2593.0000	495912	0811408	LONDON	O	5250A5C	H	10.0	9.0	OMNI	1120	820
2581.0000	495912	4811408	LONDON	O	750F3	H	10.0	9.0	OMNI	1120	820
2690.0000	541256	1293826	MC LEAN MTN	B	18344F9		2.5	38.8	280	3830	3700
2557.0000	493343	0970534	NIVERVILLE	M	6M00C3FNN		5.0	16.7	55/145	917	767
2569.0000	493343	0970534	NIVERVILLE	M	6M00C3FNN		5.0	16.7	55/145	917	767
2581.0000	493343	0970534	NIVERVILLE	M	6M00C3FNN		5.0	16.7	55/145	917	767
2587.0000	493343	0970534	NIVERVILLE	M	6M00C3FNN		5.0	16.7	55/145	917	767
2593.0000	493343	0970534	NIVERVILLE	M	6M00C3FNN		5.0	16.7	55/145	917	767
2599.0000	493343	0970534	NIVERVILLE	M	6M00C3FNN		5.0	16.7	55/145	917	767
2605.0000	493343	0970534	NIVERVILLE	M	6M00C3FNN		5.0	16.7	55/145	917	767
2611.0000	493343	0970534	NIVERVILLE	M	6M00C3FNN		5.0	16.7	055/145	917	767
2503.0000	452258	0754159	OTTAWA	O	6M00J8FNF	H	1.0	31.0	219/74	459	235
2587.2500	452258	0754159	OTTAWA	O	6000A5CF3	H	10.0	31.0	32	466	235
2627.2500	452258	0754159	OTTAWA	O	6000A5CF3	H	10.0	31.0	220	466	235
2570.0000	502646	1041837	REGINA	S	18030F9		2.4	40.8	323.17	2122	1928
2557.0000	435325	0792343	TORONTO	O	6M00J8FNF		10.0	17.2	OMNI	1080	530
2599.0000	435325	0792343	TORONTO	O			10.0				
2605.0000	435325	0792343	TORONTO	O	6M00J8FNF	H	10.0	17.2	OMNI	1080	530
2575.0000	495312	0971606	WINNIPEG	M	6M00J8FNF	H	10.0	8.2	OMNI	872	770
2587.0000	495312	0971606	WINNIPEG	M	6000A5CF3		2.9	9.6	OMNI	820	790

ANNEX A

LIST OF U.S. ASSIGNMENTS

Call Sign	Freq (MHz)	Lat	Lon	City	St	BW/EM	P	Tx Pwr (W)	Ant Gain	Beam-width	Azmuth	Gnd ft	Ant ft
WLK358	2599	454024	6843 8	Millinocket	ME	5M75C3F	H	10.000	0.00	360.0	0.0	450	170
WLK358	2611	454024	6843 8	Millinocket	ME	5M75C3F	H	10.000	0.00	360.0	0.0	450	170
WLK358	2623	454024	6843 8	Millinocket	ME	5M75C3F	H	10.000	0.00	360.0	0.0	450	170
WLK358	2635	454024	6843 8	Millinocket	ME	5M75C3F	H	10.000	0.00	360.0	0.0	450	170
WBK219	2503	444140	732756	Plattsburgh	NY	5M75C3F	V	10.000	18.90	140.0	230.0	175	135
WHR700	2659	443634	75 957	Canton	NY	5M75C3F	H	10.000	28.00	0.0	205.4	425	178
WHR699	2671	441943	7515 5	Edwards	NY	5M75C3F	V	10.000	31.40	0.0	235.5	650	187
WHR703	2683	44 930	751915	Harrisville	NY	5M75C3F	V	10.000	28.00	0.0	329.5	780	138
WHR701	2503	441511	752259	Balmat	NY	5M75C3F	H	10.000	12.70	360.0	0.0	840	182
WHR701	2503	441511	752259	Balmat	NY	5M75C3F	V	10.000	28.00	0.0	25.3	840	178
WHR701	2515	441511	752259	Balmat	NY	5M75C3F	H	10.000	12.70	360.0	0.0	840	182
WHR701	2515	441511	752259	Balmat	NY	5M75C3F	V	10.000	28.00	0.0	25.3	840	178
WHR701	2527	441511	752259	Balmat	NY	5M75C3F	H	10.000	12.70	360.0	0.0	840	182
WHR701	2527	441511	752259	Balmat	NY	5M75C3F	V	10.000	28.00	0.0	25.3	840	178
WHR701	2539	441511	752259	Balmat	NY	5M75C3F	H	10.000	12.70	360.0	0.0	840	182
WHR701	2539	441511	752259	Balmat	NY	5M75C3F	V	10.000	28.00	0.0	25.3	840	178
WHR698	2647	442029	752756	Gouverneur	NY	5M75C3F	V	10.000	28.00	0.0	151.5	450	172
KRV45	2557	43 933	773348	Rochester	NY	5M75C3F	H	10.000	13.00	360.0	0.0	463	270
KRV45	2581	43 933	773348	Rochester	NY	5M75C3F	H	10.000	13.00	360.0	0.0	463	270
KRV45	2569	43 953	773348	Rochester	NY	5M75C3F	H	10.000	13.00	360.0	0.0	463	270
WAX30	2503	43 514	774032	Rochester	NY	5M75C3F	H	10.000	15.00	0.0	45.0	536	132
WDG55	2647	425720	7849 1	Buffalo	NY	5M75C3F	H	10.000	13.00	360.0	0.0	690	150
WDG55	2659	425720	7849 1	Buffalo	NY	5M75C3F	H	10.000	13.00	360.0	0.0	690	150
WDG55	2671	425720	7849 1	Buffalo	NY	5M75C3F	H	10.000	13.00	360.0	0.0	690	150
WDG55	2683	425720	7849 1	Buffalo	NY	5M75C3F	H	10.000	13.00	360.0	0.0	690	150
KWE21	2503	425856	785137	Kenmore	NY	5M75C3F	H	1.000	13.00	360.0	0.0	600	120
KWE21	2515	425856	785137	Kenmore	NY	5M75C3F	H	1.000	13.00	360.0	0.0	600	120
WAQ310	2551	4225 8	791840	Fredonia	NY	5M75C3F	H	10.000	11.20	220.0	300.0	860	180
WAQ310	2551	4225 8	791840	Fredonia	NY	5M75C3F	V	10.000	27.00	0.0	229.0	860	170
WHN700	2509	415139	804046	Gageville	OH	5M75C3F	H	10.000	15.70	360.0	0.0	870	360
WHR450	2659	412728	812934	Beachwood	OH	5M75C3F	H	10.000	13.00	360.0	0.0	1195	365
WHR450	2683	412728	812934	Beachwood	OH	5M75C3F	H	10.000	13.00	360.0	0.0	1195	365
WHR675	2563	4130 0	814058	Cleveland	OH	5M75C3F	V	1.000	31.40	0.0	106.0	680	68
WHR675	2587	4130 0	814058	Cleveland	OH	5M75C3F	V	1.000	31.40	0.0	106.0	680	68
WHK375	2653	412959	8141 9	Cleveland	OH	5M75C3F	V	10.000	16.00	360.0	0.0	677	383
WGM96	2629	412144	814156	Parma	OH	5M75C3F	H	1.000	31.00	0.0	311.0	1122	35
KNZ60	2503	4123 2	8142 6	Parma	OH	5M75C3F	H	50.000	9.40	360.0	0.0	1020	600
WAJ20	2509	4123 2	8142 6	Parma	OH	5M75C3F	H	50.000	9.40	360.0	0.0	1020	600
WAJ20	2515	4123 2	8142 6	Parma	OH	5M75C3F	H	50.000	9.40	360.0	0.0	1020	600
WAJ20	2521	4123 2	8142 6	Parma	OH	5M75C3F	H	50.000	9.40	360.0	0.0	1020	600
WAJ20	2527	4123 2	8142 6	Parma	OH	5M75C3F	H	50.000	9.40	360.0	0.0	1020	600
WAJ20	2533	4123 2	8142 6	Parma	OH	5M75C3F	H	50.000	9.40	360.0	0.0	1020	600
WAJ20	2539	4123 2	8142 6	Parma	OH	5M75C3F	H	50.000	9.40	360.0	0.0	1020	600
WAJ20	2545	4123 2	8142 6	Parma	OH	5M75C3F	H	50.000	9.40	360.0	0.0	1020	600
WAJ20	2551	4123 2	8142 6	Parma	OH	5M75C3F	H	50.000	9.40	360.0	0.0	1020	600
WAJ20	2563	4123 2	8142 6	Parma	OH	5M75C3F	H	50.000	9.40	360.0	0.0	1020	600
WAJ20	2575	4123 2	8142 6	Parma	OH	5M75C3F	H	50.000	9.40	360.0	0.0	1020	600
WAJ20	2587	4123 2	8142 6	Parma	OH	5M75C3F	H	50.000	9.40	360.0	0.0	1020	600
WHJ951	2665	4123 2	8142 6	Parma	OH	5M75C3F	H	10.000	10.10	360.0	0.0	1020	600
WHR776	2557	4123 2	8142 6	Parma	OH	5M75C3F	H	10.000	15.70	360.0	0.0	1020	604
WHR776	2569	4123 2	8142 6	Parma	OH	5M75C3F	H	10.000	15.70	360.0	0.0	1020	604
WHR776	2581	4123 2	8142 6	Parma	OH	5M75C3F	H	10.000	15.70	360.0	0.0	1020	604
WHR776	2593	4123 2	8142 6	Parma	OH	5M75C3F	H	10.000	15.70	360.0	0.0	1020	604
WLK306	2605	4123 2	8142 6	Parma	OH	5M75C3F	H	10.000	0.00	360.0	0.0	1020	600
WLK306	2617	4123 2	8142 6	Parma	OH	5M75C3F	H	10.000	0.00	360.0	0.0	1020	600
WLK306	2629	4123 2	8142 6	Parma	OH	5M75C3F	H	10.000	0.00	360.0	0.0	1020	600

ANNEX A
LIST OF U.S. ASSIGNMENTS

Call Sign	Freq (MHz)	Lat	Lon	City	St	BW/EM	P	Tx Pwr (W)	Ant Gain	Beam-width	Azmuth	Gnd ft	Ant ft
WLK306	2641	4123 2	8142 6	Parma	OH	5M75C3F	H	10.000	0.00	360.0	0.0	1020	600
WLK310	2599	4123 2	8142 6	Parma	OH	5M75C3F	H	10.000	0.00	360.0	0.0	1020	600
WLK310	2611	4123 2	8142 6	Parma	OH	5M75C3F	H	10.000	0.00	360.0	0.0	1020	600
WLK310	2623	4123 2	8142 6	Parma	OH	5M75C3F	H	10.000	0.00	360.0	0.0	1020	600
WLK310	2635	4123 2	8142 6	Parma	OH	5M75C3F	H	10.000	0.00	360.0	0.0	1020	600
KA88717	2659	412218	814248	Cleveland	OH	5M75C3F	H	0.000	0.00	0.0	0.0	0	0
KDX68	2599	412510	814254	Cleveland	OH	5M75C3F	V	1.000	27.00	0.0	175.0	790	80
KDX68	2611	412510	814254	Cleveland	OH	5M75C3F	V	1.000	27.00	0.0	175.0	790	80
KDX68	2623	412510	814254	Cleveland	OH	5M75C3F	V	1.000	27.00	0.0	175.0	790	80
KDX68	2635	412510	814254	Cleveland	OH	5M75C3F	V	1.000	27.00	0.0	175.0	790	80
KDX68	2647	412510	814254	Cleveland	OH	5M75C3F	H	1.000	27.00	0.0	175.0	790	80
KDX68	2659	412510	814254	Cleveland	OH	5M75C3F	H	1.000	27.00	0.0	175.0	790	80
KDX68	2671	412510	814254	Cleveland	OH	5M75C3F	H	1.000	27.00	0.0	175.0	790	80
KHR35	2677	412447	8150 4	Cleveland	OH	5M75C3F	V	0.002	26.00	6.5	203.0	792	56
WHR777	2647	412448	82 421	Elyria	OH	5M75C3F	V	10.000	18.20	0.0	270.0	697	291
WHR777	2659	412448	82 421	Elyria	OH	5M75C3F	V	10.000	18.20	0.0	270.0	697	291
WHR777	2671	412448	82 421	Elyria	OH	5M75C3F	V	10.000	18.20	0.0	270.0	697	291
WHR777	2683	412448	82 421	Elyria	OH	5M75C3F	V	10.000	18.20	0.0	270.0	697	291
WHR517	2569	412157	82 552	Elyria	OH	5M75C3F	V	10.000	13.00	360.0	0.0	725	210
WHR517	2593	412157	82 552	Elyria	OH	5M75C3F	V	10.000	13.00	360.0	0.0	725	210
WHR610	2557	425938	824336	Emmett	MI	5M75C3F	H	10.000	14.00	360.0	0.0	760	298
WHR610	2569	425938	824336	Emmett	MI	5M75C3F	H	10.000	14.00	360.0	0.0	760	298
WHR610	2581	425938	824336	Emmett	MI	5M75C3F	H	10.000	14.00	360.0	0.0	760	298
WHR629	2647	425937	824348	Emmett	MI	5M75C3F	V	10.000	15.70	360.0	0.0	760	300
WHR629	2659	425937	824348	Emmett	MI	5M75C3F	V	10.000	15.70	360.0	0.0	760	300
WHR616	2509	412142	824525	Castalia	OH	5M75C3F	V	10.000	13.00	360.0	0.0	725	147
WHR616	2533	412142	824525	Castalia	OH	5M75C3F	V	10.000	13.00	360.0	0.0	725	147
WHR668	2599	412242	831317	Fremont	OH	5M75C3F	H	10.000	31.50	0.0	92.7	655	250
WHR668	2623	412242	831317	Fremont	OH	5M75C3F	H	10.000	31.50	0.0	92.7	655	250
WHR668	2599	412242	831317	Fremont	OH	5M75C3F	H	10.000	14.00	150.0	112.5	630	250
WHR668	2623	412242	831317	Fremont	OH	5M75C3F	H	10.000	14.00	150.0	112.5	630	250
WHR722	2509	413927	832555	Toledo	OH	5M75C3F	V	10.000	16.00	220.0	270.0	594	394
WHR722	2521	413927	832555	Toledo	OH	5M75C3F	V	10.000	16.00	220.0	270.0	594	394
WHR722	2533	413927	832555	Toledo	OH	5M75C3F	V	10.000	16.00	220.0	270.0	594	394
WHR722	2545	413927	832555	Toledo	OH	5M75C3F	V	10.000	16.00	220.0	270.0	594	394
WHR924	2533	424620	832758	Springfield Twp	MI	5M75C3F	H	10.000	12.70	360.0	0.0	1100	285
WHR924	2545	424620	832758	Springfield Twp	MI	5M75C3F	H	10.000	12.70	360.0	0.0	1100	285
WHR633	2509	423455	833634	Milford	MI	5M75C3F	V	10.000	12.70	360.0	0.0	940	292
WHR633	2521	423455	833634	Milford	MI	5M75C3F	V	10.000	12.70	360.0	0.0	940	292
WHR617	2509	412221	833830	Bowling Green	OH	5M75C3F	H	10.000	14.00	180.0	86.0	693	151
WHR617	2533	412221	833830	Bowling Green	OH	5M75C3F	H	10.000	14.00	180.0	86.0	693	151
WHR550	2503	413730	833920	Toledo	OH	5M75C3F	H	10.000	15.70	360.0	0.0	625	363
WHR550	2515	413730	833920	Toledo	OH	5M75C3F	H	10.000	15.70	360.0	0.0	625	363
WHR550	2527	413730	833920	Toledo	OH	5M75C3F	H	10.000	15.70	360.0	0.0	625	363
WHR550	2539	413730	833920	Toledo	OH	5M75C3F	H	10.000	15.70	360.0	0.0	625	363

NOTES: Antenna pattern/beamwidth: 31.0 dBi gain -> 4.4 deg. beamwidth;
28.0 dBi gain -> 6.3 deg. beamwidth.

ANNEX B

Provisions concerning usage in the Detroit/Windsor metropolitan areas

-Stations using channel groups A, B, C, and D, and channels G-3 and G-4 in Detroit area shall be located at the Motower Building (42W2713, 083W0950), utilize horizontal polarization, and comply with all the other requirements of the Understanding.

-Stations using channel groups E, F, and H, and channels G-1 and G-2 in Detroit area shall be located at the Renaissance Building (42W1945, 083W0225), utilize vertical polarization, and comply with all the other requirements of the Understanding.

-Stations using channel groups A, B, C, D, E, F, G, and H in the Windsor area shall use polarization opposite to that used by the corresponding channels assigned to the stations in the Detroit area and comply with all other requirements of the Understanding.

Government of Canada
Department of Communications

Gouvernement du Canada
Ministère des Communications

Ottawa, Canada
K1A 0C8

20th Anniversary - OCI & CHIN
20e anniversaire - IOC & ICIP
1972 - 1992

92-160

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OFFICE OF THE SECRETARY

Your file Votre référence

Our file Notre référence 3407.wp

JUL 22 1992

Mr. Bruce Franca
Deputy Chief Engineer
Office of Engineering and Technology
Federal Communications Commission
2025 M Street, N.W.
Washington, D.C.
20554 U.S.A.

Dear Mr. Franca,

As discussed during the FCC/DOC Technical Liaison meeting June 22-23, 1992 we have reviewed the interim coordination considerations for the band 929-932 MHz.[1,2] These considerations between the two Agencies include:

(1) sharing arrangements for both FCC and DOC in portions of the band 929-932 MHz within 75 miles of the border; and,

(2) steps to be followed for FCC requests for coordination within 250 miles of the border.

Both these actions were required so as to:

(1) identify frequencies for each country's use for paging operations within 75 miles of the border and;

(2) protect Canadian fixed systems in this band.

1 Interim Coordination Considerations for the Band 929-932 MHz dated September 14, 1983.

2 Further Interim Coordination Considerations for the Shared 929-932 MHz dated February 10, 1987.

Since protection to Canadian fixed systems is no longer required, the following amendments are made to these interim coordination considerations.

1. Subject to section 2 below, no coordination requests from the FCC are required within 250 miles of the border in the bands 929-930 MHz and 931-932 MHz.

2. Within 75 miles of the Canada/U.S. border, coordination is not required with the other country for use of the frequency blocks in the geographical zones identified for each country in the two Interim Arrangements[1,2], noting that the frequency 931.0875 MHz is available for exclusive Canadian use and the frequency 931.8625 MHz for exclusive American use.

3. Special coordination arrangements may be initiated by either Agency and implemented subject to the approval of both Agencies.

Please confirm your acceptance of the above amendment as an understanding between our two Agencies by signing below and returning to me one signed copy.

Yours truly,

Robert W. McCaughern
Deputy Director General
Engineering Programs Branch
DOC

I agree.

8/11/92

Mr. Bruce Franca
Deputy Chief Engineer
Office of Engineering and Technology
FCC

92-160

PUBLIC NOTICE

DA 91-999

FEDERAL COMMUNICATIONS COMMISSION
1919 M STREET N.W.
WASHINGTON, D.C. 20554

News media information 202/632-5050. Recorded listing of releases and texts 202/632-0002.

August 13, 1991

United States and Canada Sign Arrangement Concerning
the Use of the
928 - 929 and 952 - 953 MHz Bands
in the Vicinity of the
United States and Canadian Border

On August 7, 1991, the United States/Canada Radio Technical Liaison Committee (RTLC) finalized an Arrangement concerning the use of the above bands in the vicinity of the United States/Canada border. The RTLC is a joint FCC/DOC committee responsible for examining technical issues concerning the use of radio by both countries. This Agreement covers bands allocated principally to Multiple Address Systems under Part 94 of the Rules, but are also used by older, point-to-point systems, and by Public Land Mobile Service users under Part 22 of the Rules. Use of these frequencies by either Canada or the United States between Lines A and B and between Lines C and D requires coordination with the other country. Because use of these frequencies in the border areas was increasing significantly, there was concern in both countries about future access. The signing of this Arrangement now clears the way for the continued, orderly licensing of facilities in the border areas.

This Arrangement divides the spectrum into three pools: one pool is for primary use by the United States, one pool is for primary use by Canada, and the third pool is to be shared between the two countries on a first-in-time basis. All currently existing stations of both countries in these bands may continue to operate under their current authorizations and are to be grandfathered. The Arrangement also provides for each country to use the channels allotted primarily for use by the other country, subject to meeting specific technical sharing criteria.

The full text of the Arrangement is attached. For further information concerning this Arrangement contact Edward Jacobs, Deputy Chief, Land Mobile and Microwave Division, Private Radio Bureau, (202) 632-7597. For information pertaining specifically to use of these frequencies by Public Land Mobile Service users under Part 22 of the Rules, contact Michael Pollak, International Staff, Common Carrier Bureau, (202) 632-7834.

ARRANGEMENT BETWEEN
THE DEPARTMENT OF COMMUNICATIONS OF CANADA
AND THE FEDERAL COMMUNICATION COMMISSION
OF THE UNITED STATES OF AMERICA
CONCERNING THE USE OF THE BANDS 928 TO 929 MHz
AND
952 TO 953 MHz
ALONG THE UNITED STATES - CANADA BORDER

1. This arrangement describes the criteria for the coordination and use of the bands 928-929 MHz and 952-953 MHz for point-to-multipoint communications systems in the vicinity of the United-States - Canadian border. The frequencies shall be divided into three separate groups as described below and shared subject to the terms of this arrangement.

2. Use of frequencies within the band 952.8500 to 953.0000 MHz shall not be covered by the terms of this arrangement. Such use shall be governed by the provisions of Arrangement A of the *Agreement concerning the coordination and use of radio frequencies above thirty megacycles per second, with Annex*[1], as amended[2].

3. Notwithstanding any other provisions of this arrangement, beyond Lines A and B and Lines C and D[3], each country shall have full use of the entire 928-929/952-953 MHz bands.

4. Existing stations shall be interpreted, for the purposes of this arrangement, as meaning any station currently licensed and coordinated or grandfathered (as listed in Annex B to this arrangement) or for which a request for coordination is pending before the other administration.

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[1] Exchange of notes at Ottawa, October 24, 1962. Entered into force October 24, 1962. USA: *Treaties and Other International Acts Series* TIAS 5205 / CAN: *Canada Treaty Series* (CTS) 1962 No. 15.

[2] *Agreement Revising the technical annex to the Agreement of October 24, 1962 (TIAS 5205 / CTS 1962 No. 15).* Effected by exchange of notes at Ottawa, June 16 and 24, 1965. Entered into force June 24, 1965. USA: *TIAS 5833* / CAN: *CTS 1962 No. 15, as amended June 24, 1965.*

[3] See: *Agreement concerning the coordination and use of radio frequencies above thirty megacycles per second, with Annex,* as amended.

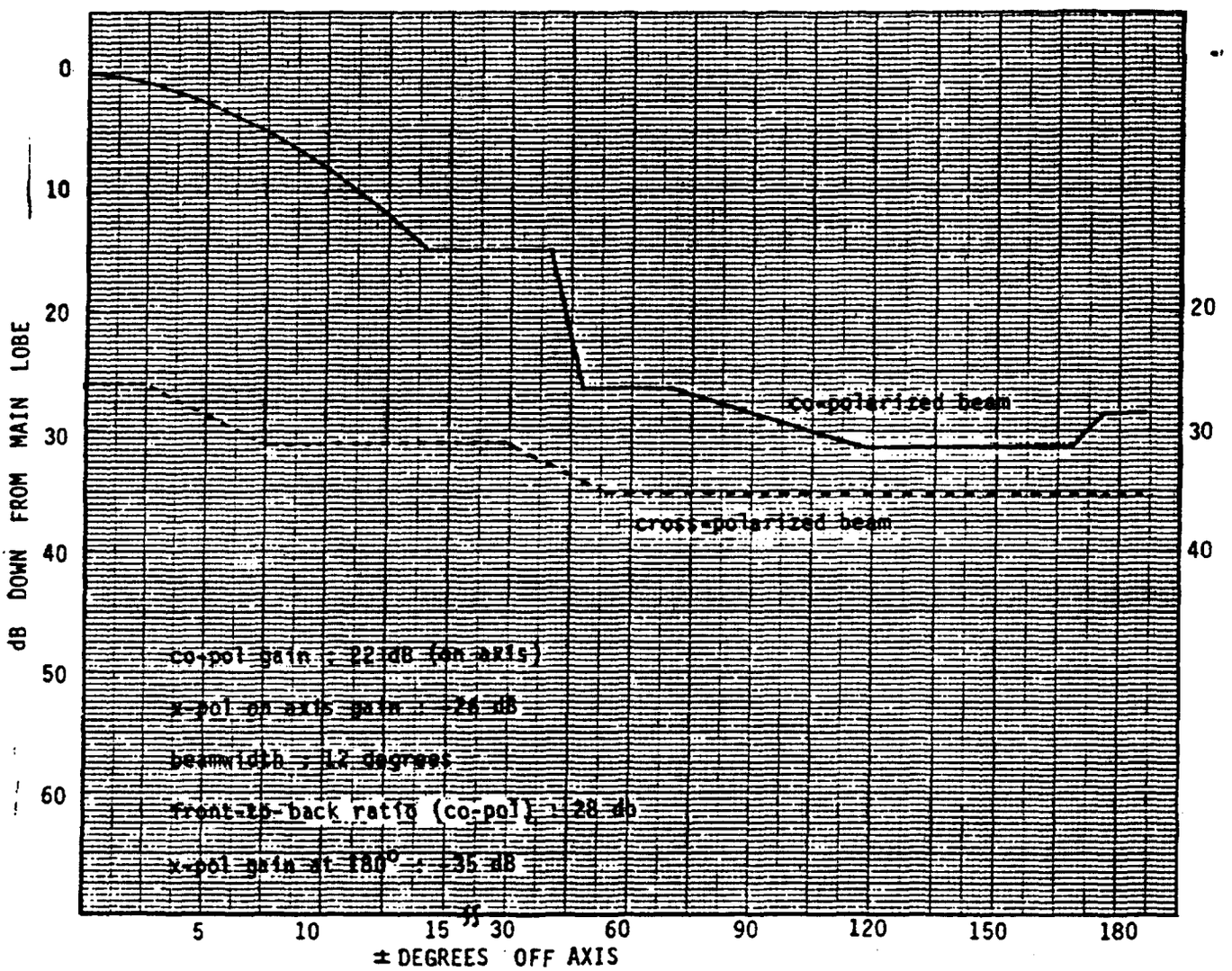

FIGURE 1: Reference Receiver Antenna Pattern

6. Wherever this arrangement provides that a power flux-density may be met in lieu of a distance separation, free space propagation may initially be assumed to determine whether the required power flux-density has been met. If the new applicant fails to meet a required pfd limit using free space propagation, the administration seeking use of the frequency may apply other methods, as appropriate, to demonstrate that the required pfd limit has, in fact, been met. Regardless of the method of analysis used, on channels co-equally shared between the United States and Canada, the actual pfd of the interfering stations must meet the required pfd limit at the locations of existing co-channel master stations. On frequencies primarily assigned for use by the other country, the pfd limit must be met at and anywhere beyond the border.

7. All stations licensed by DOC and FCC in these bands that are listed in Annex B to this arrangement shall be grandfathered and shall be allowed to continue operation under the terms of their existing authorizations. These stations shall be protected from interference from subsequently licensed co-channel stations of the other country. This protection shall consist of limiting the power flux-density of the interfering station to -100 dBW/m^2 at the protected master station location, or providing a separation distance of 145 km (90 miles) between master stations, or as mutually agreed upon on a case-by-case basis.

ANNEX A

Technical criteria applicable to stations operating in accordance with this arrangement:

Maximum effective isotropically radiated power (EIRP) for master stations in the 952-953 MHz band	—	1000 watts (30 dBW)
Maximum EIRP (or ERP for dipole antennas) for fixed remote stations and master stations in the 928-929 MHz band	—	50 watts (17 dBW)
Maximum EIRP for mobile master stations	—	25 watts (14 dBW)
Maximum antenna height above average terrain for master or control stations	—	500 feet at 1000 watts EIRP, power derated above 500 feet in accordance with the following Table:

Antenna Height Above Average Terrain (ATT)		Maximum Equivalent Isotropic Radiated Power	
Feet	Metres	Watts	dBm
Above 1000	Above 305	200	53
901-1000	275-305	250	54
801- 900	244-274	315	55
701- 800	214-243	400	56
601- 700	183-213	500	57
501- 600	153-182	630	58
500 and below	152 and below	1000	60

Formula used for calculating free space propagation losses:

pfd (dBW/m^2) = 10 Log [EIRP/(4πD^2)] ; where EIRP in watts, D in metres; and where power is relative to an isotropic radiator

pfd (dBW/m^2) = 10 Log * 1.64 [ERP/(4πD^2)] ; where ERP in watts, D in metres; and where power is relative to a dipole

ANNEX B

GRANDFATHERED LIST OF CANADIAN STATIONS
928-929 MHz AND 952-952.85 MHz

Callsign	Tx Freq	Rx Freq	Location	Lat	Long	Emission	ERP (W)
** 928.0125							
VOR201	928.0125	952.0125	Laval, Que	453429	735006	16K0F2DXN	1.000
VOR202	928.0125	952.0125	Laval, Que	453118	734836	16K0F2DXN	1.000
VOR203	928.0125	952.0125	Laval, Que	453131	734521	16K0F2DXN	1.000
VOR204	928.0125	952.0125	Laval, Que	453519	734300	16K0F2DXN	1.000
VOR205	928.0125	952.0125	Laval, Que	453429	734206	16K0F2DXN	1.000
VOR226	928.0125	952.0125	Laval, Que	453107	734908	16K0F2DXN	0.616
VOR227	928.0125	952.0125	Laval, Que	453320	734051	16K0F2DXN	0.616
VOR228	928.0125	952.0125	Laval, Que	453305	734130	16K0F2DXN	0.616
VOR229	928.0125	952.0125	Laval, Que	453535	734643	16K0F2DXN	0.616
VAF473	928.0125	952.0125	Val d'Or, Que	480712	775448	16K0F2DXN	3.100
** 928.0625							
VOJ201	928.0625	952.0625	St-Hyacinthe, Que	453719	725710	16K0F2DAN	1.000
VOJ202	928.0625	952.0625	St-Hyacinthe, Que	453732	725710	16K0F2DAN	1.000
VOJ203	928.0625	952.0625	St-Hyacinthe, Que	453736	725654	16K0F2DAN	1.000
VOJ204	928.0625	952.0625	St-Hyacinthe, Que	453730	725726	16K0F2DAN	1.000
VOJ205	928.0625	952.0625	St-Hyacinthe, Que	453700	725744	16K0F2DAN	1.000
VOJ206	928.0625	952.0625	St-Hyacinthe, Que	453649	725814	16K0F2DAN	1.000
VOJ207	928.0625	952.0625	St-Hyacinthe, Que	453700	725748	16K0F2DAN	1.000
VOJ208	928.0625	952.0625	St-Hyacinthe, Que	453615	725825	16K0F2DAN	1.000
VOJ209	928.0625	952.0625	St-Hyacinthe, Que	453602	725851	16K0F2DAN	1.000
VOJ210	928.0625	952.0625	St-Hyacinthe, Que	453738	725751	16K0F2DAN	1.000
VOJ211	928.0625	952.0625	St-Hyacinthe, Que	453703	725723	16K0F2DAN	1.000
VOJ212	928.0625	952.0625	St-Hyacinthe, Que	453659	725714	16K0F2DAN	1.000
VOJ213	928.0625	952.0625	St-Hyacinthe, Que	453708	725631	16K0F2DAN	1.000
VOJ214	928.0625	952.0625	St-Hyacinthe, Que	453646	725735	16K0F2DAN	1.000
VOJ215	928.0625	952.0625	St-Hyacinthe, Que	453554	725916	16K0F2DAN	1.000
VOJ216	928.0625	952.0625	St-Hyacinthe, Que	453732	725729	16K0F2DAN	1.000
VOJ217	928.0625	952.0625	St-Hyacinthe, Que	453701	725950	16K0F2DAN	1.000
VOJ218	928.0625	952.0625	St-Hyacinthe, Que	453743	725942	16K0F2DAN	1.000
VOJ219	928.0625	952.0625	St-Hyacinthe, Que	453815	725937	16K0F2DAN	1.000
VOJ220	928.0625	952.0625	St-Hyacinthe, Que	453843	730006	16K0F2DAN	1.000
VOJ221	928.0625	952.0625	St-Hyacinthe, Que	453853	725958	16K0F2DAN	1.000

Callsign	Tx Freq	Rx Freq	Location	Lat	Long	Emission	ERP (W)
XLB886	928.7625	952.7625	Delta, BC	490830	1230153	25K0F3DBN	83.000
XLB892	928.7625	952.7625	Vancouver, BC	491729	1230531	25K0F3DBN	83.000
XLB893	928.7625	952.7625	Richmond, BC	491153	1230725	25K0F3DBN	83.000
XLB891	928.7625	952.7625	Vancouver, BC	491629	1230820	25K0F3DBN	83.000
XLB887	928.7625	952.7625	Vancouver, BC	491224	1230155	25K0F3DBN	83.000
XLB894	928.7625	952.7625	Richmond, BC	491200	1230435	25K0F3DBN	83.000
** 928.8625							
XLB889	928.8625	952.8625	Chilliwack , BC	490834	1215835	25K0F3DBN	83.000
XLB895	928.8625	952.8625	Matsqui, BC	490713	1221755	25K0F3DBN	83.000
** 952.0125							
VOR200	952.0125	928.0125	Laval, Que	453457	734505	16K0F2DXN	1.000
VAF472	952.0125	928.0125	Val d'Or , Que	480600	774630	16K0F2DXN	2.000
** 952.0625							
VOJ200	952.0625	928.0625	St-Hyacinthe, Que	453746	730012	16K0F2DAN	0.955
** 952.4875							
XLQ681	952.4875	928.4875	Nepean, Ont	451628	754455	16K0F1DCN	6.000
** 952.7625							
XLB877	952.7625	928.7625	Mt Seymour, BC	492112	1225710	25K0F3DBN	34.700
** 952.8625							
XLB882	952.8625	928.8625	Sumas Peak, BC	490710	1220747	25K0F3DBN	34.700

GRANDFATHERED LIST OF U.S. STATIONS
928-929 MHz AND 952-952.85 MHz

Callsign/ File	Master	Remote	Location	Lat	Long	Emission	EIRP (dBm)
** SEATTLE AREA							
KNKL914	928.9125		Bellevue, WA	473241	1220628	16K0F3E	47.0*
KNKL914	928.99375		Granite Falls, WA	480059	1225131	16K0F3E	47.0*
KNKL914	928.99375		Point Roberts, WA	485622	1230817	16K0F3E	47.0*
759452	952.00625	928.00625	Anacortes, WA	482945	1223310	12K0F9	34.7
WHJ771	952.0375	928.0375	Seattle, WA	473257	1224702	15K0F2D	39.3
WNET680	952.0625	928.0625	Issaqua, WA	473018	1215815	16K0F2D	45.0
WNTF637	952.0875	928.0875	McMicken Heights, WA	472720	1221657	25K0F2D	52.0
WNEN314	952.1125	928.1125	Seattle, WA	473617	1221946	25K0F2D	50.0
WNEX580	952.1375	928.1375	Bremerton, WA	473252	1224653	25K0F3E	52.0
WNEX581	952.1375	928.1375	Bellevue, WA	473231	1220629	25K0F3E	52.0
WNEX582	952.1375	928.1375	Granite Falls, WA	480306	1215137	25K0F3E	52.0
WNET681	952.1625	928.1625	Seattle, WA	473652	1222015	16K0F2D	46.8
WNEN314	952.1875	928.1875	Seattle, WA	473617	1221946	25K0F2D	50.0
WHJ771	952.2375	928.2375	Seattle, WA	473257	1224702	15K0F2D	44.7
WNEU483	952.5625	928.5625	Arlington, WA	481210	1221056	25K0F2D	48.1
WNEO891	952.6375	928.6375	Clearview, WA	475031	1220723	25K0F2D	48.1
WNEV369	952.6625	928.6625	Renton, WA	472804	1221124	25K0F2D	49.9
WNEO890	952.7125	928.7125	Sultan, WA	475732	1214320	25K0F2D	48.1
WNEO892	952.7875	928.7875	Everett, WA	475849	1221151	25K0F2D	48.1
** IL/ND/MN/WI/N MI AREA							
KOR933	928.9625		Chicago, IL	415714	874237	16K0F3E	47.0*
WNEO948	952.0125	928.0125	Mountain Iron, MN	473350	923815	25K0F2D	30.4
WNEO959	952.0125	928.0125	Havre, MT	482939	1094239	25K0F2D	42.0
WNEP344	952.0375	928.0375	Rudyard, MT	483215	1103501	25K0F2D	34.5
WNTA860	952.05625	928.05625	Mountain Iron, MN	473219	923701	12K0F2D	37.6
WNEP343	952.0625	928.0625	Lothair, MT	482939	1111440	25K0F2D	34.2
WNTB926	952.08125	928.08125	Kalispell, MT	481034	1142053	12K0F2D	44.9
WNEO960	952.0875	928.0875	Shelby, MT	483057	1114947	25K0F2D	33.5
WNEP269	952.1125	928.1125	Cut Bank, MT	483717	1121948	25K0F2D	34.2
WNEP266	952.1375	928.1375	Browning, MT	483203	1130042	25K0F2D	40.6
WNEP267	952.1625	928.1625	East Glacier, MT	482911	1131045	25K0F2D	33.6
WNEP268	952.1875	928.1875	East Glacier, MT	482141	1131730	25K0F2D	33.6
WNEP603	952.2375	928.2375	West Glacier, MT	482600	1135754	25K0F2D	34.1
WHK201	952.5375	928.5375	Duluth, MN	464931	920745	25K0F2D	39.3