

Appendix D

Class B and Super B Background Information

Table 1 below sets out the FCC’s rules concerning minimum geographic separation between stations.

47 CFR 73.207 Minimum Distance Separation Between Stations.					
Table B - Minimum Distance Separation in Kilometers					
Class	Co - Ch	Adjacent Channels			I.F.
	0	200	400	600	10.6-10.8
A to A	132	85	45	37	8
A to B1	180	113	62	54	16
A to B	206	132	76	69	16
A to C1	239	164	98	90	32
A to C	242	177	108	100	32
B1 to B1	197	131	70	57	24
B1 to B	223	149	84	71	24
B1 to C1	256	181	106	92	40
B1 to C	259	195	116	103	40
B to B	237	164	94	74	24
B to C1	271	195	115	95	40
B to C	274	209	125	106	40
C1 to C1	292	217	134	101	48
C1 to C	302	230	144	111	48
C to C	306	241	153	113	48

Table 1 – Minimum Separation Requirements

Class B Stations

A number of Class B stations in the United States are authorized to operate with geographic separation that fails to meet the FCC’s minimum spacing requirements. The following tables analyze the number of short spaced Class B to Class B situations in the United States and the level of severity of the short spacing. For each scenario presented (Class B with 1, 2, 3 or 4 interferers), the tables analyze the amount of separation between stations. Short spaced 90 to 99% is closer to full spacing (90-99% of full spacing) than 30 to 39%. The tables also separately list the number of stations operating with nondirectional antennas (listed as “NDA”). These tables demonstrate that the majority of short spaced stations have at least 80% of normal spacing. The tables also demonstrate that most stations with less than 80% of normal spacing use directional antennas to mitigate interference.

# Class B's w/ at least 1 Class B Interferer (of 1025 Total)				
% of Nominal Spacing	# All	%	# NDA	%
Short Spaced Stns (All)	369	36	263	25.7
Short Spcd 30% to 39%	4	0.4	0	0
Short Spcd 40% to 49%	21	2	7	0.7
Short Spcd 50% to 59%	37	3.6	20	2
Short Spcd 60% to 69%	50	4.9	25	2.4
Short Spcd 70% to 79%	80	7.8	63	6.1
Short Spcd 80% to 89%	111	10.8	90	8.8
Short Spcd 90% to 99%	66	6.4	58	5.7
Fully Spaced 100% Plus	656	64	762	74.3
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< 56.8% (WKCI/WPDH)	45	4.4		
< 70.7% (WKCI/WCBS)	117	11.4		
< 88.8% (WKCI/WWBB)	294	28.7		
< 65% (WCSX/WXKR)	88	8.6		
< 71.2% (WCSX/WXKR)	119	11.6		

Table 2 – Class B Stations with 1 Class B Interferer

# Class B's w/ at least 2 Class B Interferers (of 1025 Total)				
% of Nominal Spacing	# All	%	# NDA	%
Short Spaced Stns (All)	113	11	66	6.4
Short Spcd 30% to 39%	0	0	0	0
Short Spcd 40% to 49%	1	0.1	1	0.1
Short Spcd 50% to 59%	3	0.3	1	0.1
Short Spcd 60% to 69%	8	0.8	3	0.3
Short Spcd 70% to 79%	21	2	10	1
Short Spcd 80% to 89%	39	3.8	26	2.5
Short Spcd 90% to 99%	41	4	25	2.4
Fully Spaced 100% Plus	912	89	959	93.6

Table 3 – Class B Stations with 2 Class B Interferers

# Class B's w/ at least 3 Class B Interferers (of 1025 Total)				
% of Nominal Spacing	# All	%	# NDA	%
Short Spaced Stns (All)	26	2.5	19	1.9
Short Spcd 30% to 39%	0	0	0	0
Short Spcd 40% to 49%	0	0	0	0
Short Spcd 50% to 59%	0	0	0	0
Short Spcd 60% to 69%	1	0.1	1	0.1
Short Spcd 70% to 79%	2	0.2	2	0.2
Short Spcd 80% to 89%	10	1	6	0.6
Short Spcd 90% to 99%	13	1.3	10	1
Fully Spaced 100% Plus	999	97.5	1006	98.1

Table 4 – Class B Stations with 3 Class B Interferers

# Class B's w/ at least 4 Class B Interferers (of 1025 Total)				
% of Nominal Spacing	# All	%	# NDA	%
Short Spaced Stns (All)	3	0.3	1	0.1
Short Spcd 30% to 39%	0	0	0	0
Short Spcd 40% to 49%	0	0	0	0
Short Spcd 50% to 59%	0	0	0	0
Short Spcd 60% to 69%	0	0	0	0
Short Spcd 70% to 79%	1	0.1	1	0.1
Short Spcd 80% to 89%	0	0	0	0
Short Spcd 90% to 99%	2	0.2	0	0
Fully Spaced 100% Plus	1022	99.7	1024	99.9

Table 4 – Class B Stations with 4 Class B Interferers

Super B Stations

Super B stations are not evenly distributed throughout the U.S. They are concentrated in a limited number of states. As Figure 1 illustrates, Super B stations represent a small fraction of the U.S. FM stations.

US Super B Distribution

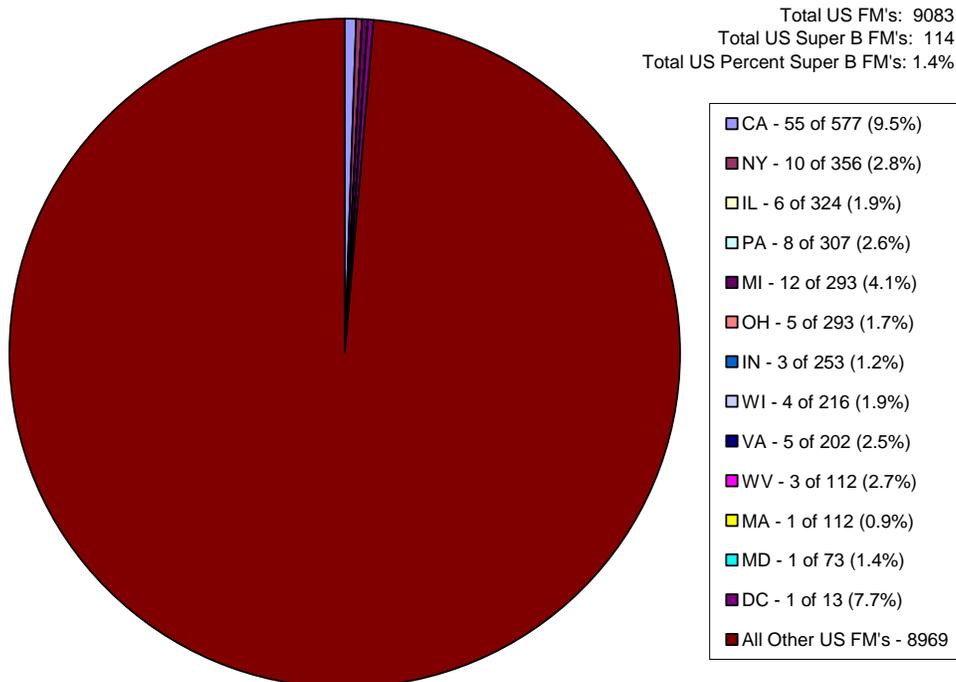


Figure 1 – US Super B Distribution by State

In addition, Super B stations do not exhibit any uniformity in terms of the extent by which they exceed normal Class B power levels. Figure 2 illustrates the diverse power level issues presented by these stations and the unique power levels of the California Super B stations. Therefore, it is difficult to apply conclusions about Super B stations to other stations or even to all licensed Super B stations. It is also likely that California Super B stations represent the worst case scenario for testing IBOC interference.

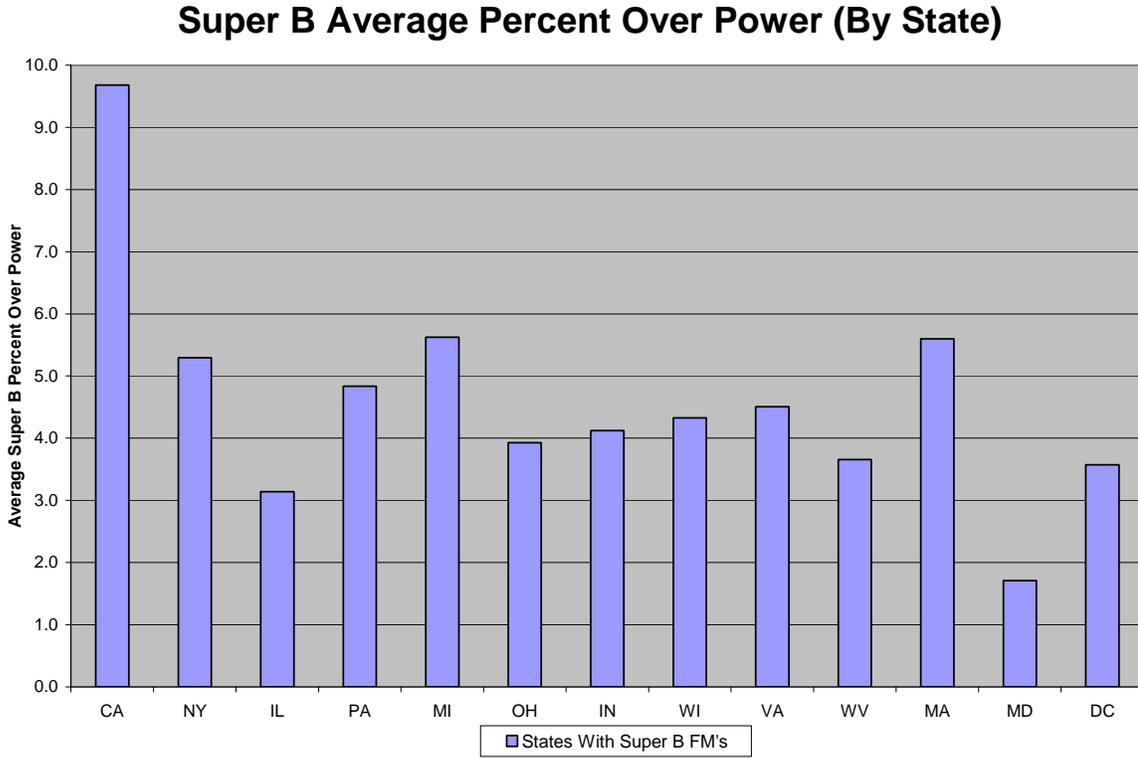


Figure 2 – Super B Average Power By State