Channel Assignment
FM Stations, Class A, B, C
Frequency Assignment
Station Separation
Table of Assignments

Rule making to increase the number of possible assignments that are available for FM station use by allowing Class A stations to operate on Class B-C channels and to add two more classes of FM channels with the distance separation table modified accordingly. BC 80–90

BC

FCC 80–108

BEFORE THE

FEDERAL COMMUNICATIONS COMMISSION

WASHINGTON, D.C. 20554

In the Matter of	
Modification of FM Broadcast Station Rules to Increase the Availability of Commercial FM Broadcast Assignments.	BC Docket No. 80–90 RM-2587 RM-3226 RM-3367

NOTICE OF PROPOSED RULE MAKING

(Adopted: February 28, 1980; Released: March 14, 1980)

BY THE COMMISSION: CHAIRMAN FERRIS ISSUING A SEPARATE STATEMENT; COMMISSIONER LEE ABSENT; COMMISSIONER BROWN CONCURRING AND ISSUING A STATEMENT.

1. The Commission has before it three petitions for rule making seeking changes in the FM allocation rules to permit additional channel assignments. These petitions were filed by George W. Phillips of Laurinburg Broadcasting Company ("Laurinburg" RM-2587), Serge Bergen ("Bergen" RM-3226),[1] and the National Telecommunications

[1] We have received comments in response to the Laurinburg and Bergen petitions from Thomas C. Smith of Schofield, Wisconsin; South Cobb Broadcasting Co. of Austell, Georgia, and Carroll-Haralson Radio, Inc. of Bremen, Georgia; Mr. Hughey of Tallassee, Alabama; and Cherokee Broadcasting Co. of Murphy, North Carolina. Several letters were also received from various persons expressing interest or support. A separate request was made by Cherokee Broadcasting Company to consolidate the two petitions for joint consideration which we have done herein.

and Information Administration ("NTIA" RM-3367).[2] This *Notice* addresses the requests contained in those petitions, proposes specific changes in the FM assignment rules, and seeks comments on them. In an associate item to be before the Commission in the near future, we will discuss the implications of these changes on our present assignment policies and set forth various proposals for modifying our current policies. Before discussing the particular requests contained in the petitions, we shall set forth a brief description of the present FM allocation rules and the rationale underlying their adoption.

I. Background

2. In 1963, the Commission established an FM Table of Assignments in the *Third Report, Memorandum Opinion and Order* (40 F.C.C. 747) in Docket 14185. The purpose of such a table was twofold—first, to distribute assignments on an equitable basis by insuring to the extent possible the future availability of assignments for those communities which might not have a present demand; and second, to afford FM stations the opportunity to expand their facilities as their financial situation developed by providing interference protection to a maximum power and antenna height. Up until that time, new applications were being processed on a demand basis. The application was granted if no interference was caused within the 1 mV/m contour of an existing station or if, on balance, the benefits of the new service outweighed the resultant interference. A result of the demand system was a saturation of available frequencies in the major cities at the expense of nearby smaller localities. Prompted by this dislocation and uneven distribution, the Commission developed an overall plan which optimized both the individual channel use and the FM service in general. A Table of Assignments was established to allocate the available frequencies in an equitable manner.[3]

3. With the dual purpose in mind of maximizing the number of assignments while providing adequate protection from interference, the Commission compared the service radius of each class of station to its interfering contour. It was concluded that the optimum balance between individual station coverage and the maximum number of

[2] Formal comments responding to the NTIA petition were received from American Broadcasting Companies, Inc.; National Association of Broadcasters; National Radio Broadcasters Association; McKenna, Wilkinson and Kittner, on behalf of its radio broadcast clients; Institute of High Fidelity, Inc.; Muzak, a division of Teleprompter Corp. Letters were submitted by various interested persons and groups. Each of the comments were helpful in our analysis of the proposals. However, for the most part, the filings concern matters which we have not included for consideration herein. See paragraph 8, *infra*.

[3] This requirement is expressed in Section 307(b) of the Communications Act, which provides: "In considering applications for licenses, and modifications and renewals thereof, when and insofar as there is demand for the same, the Commission shall make such distribution of licenses, frequency, hours of operation, and of power among the several States and communities as to provide a fair, efficient, and equitable distribution of radio service to each of the same."

station assignments would be produced by adopting service contours of 15 miles in radius for a Class A station, 40 miles for a Class B, and 65 miles for a Class C. The signal strength contours requiring protection to produce these service radii were as follows: 927 uV/m for a Class A station; 560 uV/m for a Class B station; and 944 uV/m for a Class C station. The distance separations set forth in Section 73.207 of the Rules were the culmination of these efforts.[4]

4. In order to understand the proposed changes set forth in this proceeding, a short outline of the present FM allocation structure is offered. The FM broadcast band is divided into 100 channels (each 200 kHz wide) which are located between 88 and 108 MHz. The first 20 channels are designated for use by noncommercial educational stations and are not a part of the Table. Interspersed throughout the remaining 80 channels are 20 designated for use by Class A stations only. See Section 73.206(a)(1) and (3) of the Commission's Rules. Stations operating on Class A channels are designed to provide local service to smaller communities. See Section 73.206(a)(2). The remaining 60 channels are reserved for use by Class B or Class C stations, depending on the geographical location of the station. See Section 73.206(b)(1), (3) and (5). Class B stations were designed to provide coverage to the larger communities within the densely populated northeastern part of the United States (Zone I) and most of the State of California (Zone I-A). See Section 73.206(b)(2). Class C stations were also designed to provide service to the larger communities but at the same time could be used to serve the more sparsely settled areas of the rest of the country (Zone II). See Section 73.206(b)(4). Since Class A channels are assigned regardless of the zone, each zone is now permitted two classes of channels. The maximum permissible power and antenna height for each class of station is as follows:

Class	Max ERP in kilowatts (dBk)	Max HAAT in meters (feet)
A	3 (4.8)	92 (300)
B	50 (17)	153 (500)
C	100 (20)	610 (2000)

5. Since its adoption, the Table of Assignments has proven to be an effective means of allocating available FM frequencies. Overtime,

[4] Section 73.207 provides (in miles):

Class of Station	Class A Co-	200	400	600	Class B Co-	200	400	600	Class C Co-	200	400	600
A	65	40	15	15	-	65	40	40	-	105	65	65
B					150	105	40	40	170	135	65	65
C									180	150	65	65

however, fewer FM frequencies remain available as more and more assignments are made. In many parts of the country, the demand for service has not been fully satisfied; yet no frequencies are available for assignment. The very success of the FM broadcast service has led to a scarcity of frequencies in many places.[5] The Commission now wishes to initiate a rule making proceeding to pursue the means by which increased numbers of FM assignments can be made available.

II. Petitions

6. Petitions suggesting changes in the FM assignment structure to permit additional FM assignments were received as noted in paragraph 1. Laurinburg and Bergen request that the Commission initiate a rule making proceeding to amend Section 73.206 to permit stations with Class A facilities to operate on the 60 channels designated for use by Class B-C stations. The Laurinburg proposal would favor such operations only in cases where Class B or Class C channels could not be assigned and used by Class B or Class C stations and where no Class A channels are available for assignment. Both petitioners note that the distance requirement tables would have to be amended to reflect co-channel separations resulting from Class A stations operating on Class B-C channels.

7. The NTIA petition requests changes beyond those sought by Bergen and Laurinburg. It supports changes in the FM rules to allow the use of directional antennas, terrain shielding, and more classes of stations. NTIA also supports investigation into such concepts as co-locating adjacent channel stations; reducing the minimum distance separation requirements to force improved receiver performance; a return to the protected contour, case-by-case, approach of making new assignments; and reducing the channel width to something less than the present 200 kHz. These changes, it contends, would provide for the addition of many new assignments.

8. The Commission has carefully reviewed each of the suggestions for change put forward by the petitioners. We have divided the proposals into those that deal primarily with changes within the present allocation framework and those that seek substantive changes to the allocation framework. On the basis of our review, we have decided to focus our attention on those proposals dealing with changes within the present allocation framework. It is our belief that immediate benefits may be obtained from these proposals that would be delayed should we attempt to examine some of the more complex suggestions put forward. For this reason, such areas as terrain shielding, highly directional antennas, reducing the FM bandwidth, and co-locating adjacent channel stations, will not be considered in this

[5] In 1962, when the Table of Assignments was proposed in the *Second Further Notice of Proposed Rule Making* (40 F.C.C. 728) the number of existing FM stations (licensed and permit status) was approximately 1,200. The December, 1979, figure for FM stations on the air was over 3,000.

proceeding. We will, however, consider those matters in a future proceeding.*

III. Actions Now Proposed

9. The Commission has conducted studies which indicate that the efficiency of use of the FM broadcast band may be increased if rule changes along the lines of those suggested by the petitioners are considered. These changes would increase the availability of assignments while providing protection to the service contours (except for Class B stations) used in establishing the original Table and its distance separation requirements. Briefly then, the Commission wishes to make some modifications to the present rules while keeping intact the benefits the Table of Assignments concept represents. Therefore, we propose:

(a) to allow stations with Class A facilities to operate on Class B-C channels if a Class A channel is not available;

(b) to add two new classes of stations: Class B1 (an intermediate class between Class A and B) with maximum facilities of 20 kW (13 dBk) ERP and antenna height of 92 meters (301.84 feet) above average terrain, and Class C1 (an intermediate class between Class B and C) with maximum facilities of 100 kW (20 dBk) ERP and 305 meters (1000.66 feet) antenna height;

(c) to permit Class B (including B1) facilities in Zone II;

(d) to require that all existing Class B and C stations meet certain operating minimums for power and antenna height or be subject to reclassification to a lower class of channel. A similar requirement is also proposed for new Class C authorizations which would allow a new Class C assignment to initially start with Class C1 facilities; and

(e) to adopt a new separation table proposed herein (see Table I, *infra.*) which reflects the updated propagation curves (adopted in Dockets 16004 and 18052). It also incorporates a uniform protection criteria for all classes of stations and continues the Commission's conversion of its rules to the International System of Units (SI).[6]

* The Commission encourages NTIA to submit data and information describing the potential of directional antennas and terrain shielding to provide equivalent protection. Particular effort must be devoted to the actual-versus-claimed performance of directional antennas. In addition, it appears that agreement must be reached by the scientific community on the method used to calculate terrain effects if this concept is to be seriously considered. The Commission is also interested in discussing how these concepts may be incorporated into our present Table of Assignments approach.

[6] The proposed changes to the FM broadcast service will be in the International System of Units in order to conform to the program adopted on July 28, 1976, in which the Commission is attempting to convert its rules and regulations to metric units. (See Public Notice, FCC 76-737). Conversion is appropriate at this time because the separation table independently regulates the distances between commercial FM

IV. Studies and Discussions

10. After receipt of the Laurinburg petition, a number of computer studies were conducted to determine availability of channels in various areas of the country. These studies confirmed that FM assignments are becoming scarce in many areas and that relief could be obtained by allowing Class A stations to operate on Class B-C channels. Early last year in conjunction with Canadian FM reallocation proposals, an extensive allocation study was conducted for the northeastern portion of the United States. It demonstrated that certain areas are entirely foreclosed from obtaining additional FM assignments. The results of this study are contained in Table II. It also indicated that the use of Class B-C channels by Class A stations would allow new FM assignments to be made over substantial areas. For example, at present new FM assignments can be made to only 5% of a land area consisting of western Ohio and most of Illinois (see Area #8 of Table II). That percentage increases to 81% if Class A stations are permitted to operate on Class B-C channels.[7] Studies conducted in other areas of the country similarly indicate that a degree of land area gain (hence, new assignment potential) could be obtained from intermixing classes of stations on the same channel. Although not every area in the country would now benefit from the use of lower power Class A facilities on Class B-C channels, the conclusion can be drawn that substantial benefits can be obtained immediately and future gains can be expected in areas that would eventually be otherwise foreclosed under our present rules.

11. The Commission has also made some preliminary investigations into the merits of adding more classes of stations. Additional classes could increase the number of assignments by reducing the distance separation requirements for stations operating with intermediate facilities. The request for additional classes of stations, and to a large part, the Commission's analysis of the proposal, are based on the premise that a disproportionately large number of existing stations are operating with less than maximum facilities. Therefore, these stations

stations. The Table could be converted from miles to kilometers without changing many of the other rules (such as propagation curves) immediately. For clarity, only those rules in Subpart B, Part 73, which are directly related to this proceeding will be converted at this time. Other rules will be updated as necessity and time permit. This conversion period must be recognized as a transition time and there will be slight inconsistencies between some of the rules. For example, the maximum antenna height for a Class A station is 300 feet at present which would be converted to 92 meters or 301.84 feet under the proposed rules. We will make every attempt to keep such discrepancies to a minimum and we welcome comments on the timeliness of this conversion.

[7] No attempt was made to translate these percentages to specific numbers of new assignments that could be gained, For example, 81% refers to land area; not to an increase in the number of new channels. However, it does indicate that new assignments are possible over a wider geographical area and therefore, to potentially more communities.

are receiving protection in excess of that intended when the original Table and distance separation standards were established. The separation requirements are based upon the assumption that each assigned station is, or at some time in the future will be, operating at the maximum power and antenna height for its particular class. It was the intention of the creators of the Table to provide stations with adequate protection until their financial viability permitted expansion to maximum or near maximum values. Although FM broadcasting has developed to become a competitive and, in some cases, dominant force in today's marketplace, many FM stations continue to operate with less than desired facilities. The Commission's studies reveal that, based on their service radius, only 20% of the stations occupying Class C assignments operate with facilities that warrant a Class C classification. In fact, nearly 25% of the licensed Class C stations provide service equivalent to that furnished by a maximum facility Class B station. Thus, some 80% of existing Class C stations are receiving excessive protection in terms of their operating facilities. This may well be a contributing factor to the scarcity of FM assignments in many parts of the country and a luxury that can no longer be afforded. In addition, the fact that such a large number of Class C stations operate with these lesser facilities may indicate that the licensees believe that the coverage they provide is adequate for their purposes. Thus, in an effort to minimize overprotection, and to permit the assignment of additional classes of stations, we are proposing to create two new classes of stations: Class B1 and Class C1.[8]

12. No subclassification is proposed for Class A stations since we feel it would be undesirable to consider adopting a class of station with less than a 23 kilometer (14.3 miles) service radius. The interfering signal of such a station would be disproportionately large compared to its service radius. Also, a majority of present Class A stations operate with maximum or near maximum facilities. On the other hand, we believe that the addition of a Class B1 has merit because it would offer an intermediate class of channel between Class A and Class B stations. In those instances where a full Class B assignment would not meet the required distance separations, a Class B1 assignment (assuming it would meet the separation criteria) would offer a larger service area and a more efficient assignment than a Class A station.[9]

13. Therefore, we are proposing two additional classes of stations which appear to warrant examination. The five classes of stations and their maximum facilities would be as follows:

[8] The facilities proposed for Classes B1 and C1 are different from those noted as B1 and C1 in Docket 20735. Also, Canada does have a Class C1 (same facilities as proposed herein) but not the B1 class of station.

[9] Only 10% of the licensed Class B stations are operating with facilities that are significantly less than maximum. Therefore, overprotection is not the primary reason for proposing to create a Class B1 station.

Class of station	Max ERP in kilowatts (dBk)	Max HAAT in meters (feet)
A	3 (4.8)	92 (301.84)
B1	20 (13)	92 (301.84)
B	50 (17)	153 (501.97)
C1	100 (20)	305 (1000.66)
C	100 (20)	610 (2001.31)

14. The minimum power for Class A stations under the Commission's proposal would remain at the present value of 100 W (-10 dBk). The minimum power for Class B1, B, and C1 stations would have to exceed the maximum of the preceding smaller class of station (Classes A, B1, and B, respectively). Except for Class C assignments, no minimum antenna height above average terrain (HAAT) would be specified. Class C stations would be required to operate at 100 kW (20 dBk) power and an antenna height exceeding 305 meters (1000.66 feet) HAAT. Referring to the above Table, it is noted that the difference in Class C and C1 stations is the maximum permissible antenna height.

15. In order to achieve maximum benefit from the additional classes of stations (by eliminating much of the present overprotection from interference), it is necessary to reclassify any existing Class B and C stations that do not meet the minimum facility requirements in paragraph 14. Class B or Class C stations which do not operate with greater than minimum facilities as provided herein would be given 3 years (from the effective date of the action) to expand their facilities or be reclassified to the lower class of channel which more accurately reflects the actual operating facilities. During the 3 year period, each station would be renewed on a conditional basis to insure conversion to minimum Class B or Class C facilities. If the expansion of facilities is not accomplished within the 3 year period then the downward reclassification would take place.

16. A similar reclassification system would apply to newly authorized Class C stations. We are proposing to permit all newly authorized Class C stations to commence operations with Class C1 facilities and have up to 6 years from the date of authorization to conform to minimum Class C facilities. We recognize that the financial burdens to meet the minimum operating requirements can be onerous for Class C licensees until their operations have had sufficient time to become profitable. To allow for equal treatment we would provide that all stations have up to 6 years to convert. Thus all stations which have been authorized within 3 years prior to the effective date of the action taken in this proceeding would also have additional time (up to 6 years from the date a license is granted) to upgrade their facilities or be reclassified downward. However, we do not propose to allow any other class of station to commence operations with less than the minimum proposed facilities because we do not feel that the initial costs are as

burdensome, nor are the other station classes subject to the minimum antenna height requirement.

17. Our proposal to increase the number of station classes necessitates amendment of the distance separation table to include the spacing requirements among the new classes (see Table I *infra.*) The present separation table (Section 73.207) provides predicted protection from interference to approximately the 60 dBu (1 mV/m) contour for both Class A and Class C stations. Class B assignments are provided predicted protection from interference to approximately the 54 dBu (.5 mV/m) contour.[10] The greater protection for Class B stations resulted from a desire to obtain a particular service radius (65 kilometers or 40 miles) rather than a need for greater protection. The proposed separation table provides predicted protection to the 60 dBu contour for all classes, including Class B.[11] A change in the protected contour for Class B stations is necessary to obtain meaningful benefits from our proposal to add more classes of stations. For example, under the proposed separation requirements, two Class C1 stations operating on the same channel would be a minimum of 245 kilometers (152 miles) apart. Under the present separation requirements co-channel Class B stations may be no closer than 241 kilometers (150 miles). Unless the protection afforded Class B stations is modified, no reason exists for the creation of the C1 class of station. Also, we are not convinced that Class B stations require or deserve a greater degree of protection than either a Class A or C station. This was, after all, not the original intent when the 55 dBu contour was chosen for protection. The proposed separation table (Table I) does represent a decrease in the protected service radius for a Class B assignment of approximately 11 kilometers (7 miles). However, the reduction in the required separation from 241 kilometers (150 miles) at present to 191 kilometers (119 miles) as proposed for Class B to B co-channel, would appear to justify the smaller service area by enabling more FM assignments to be made.[12]

18. In addition to studies undertaken to determine the effects of

[10] As stated previously, the present mileage separation table originally provided protection to 927 uV/m contour for Class A stations, 560 uV/m for Class B and 944 uV/m for Class C. However, adoption of new propagation curves in 1975 (53 F.C.C. 2d 855) refined these figures.

[11] Although the protection criteria of the separation tables (present and proposed) has been noted in this document, it is stated for reference purposes only. The nature and extent of protection from interference accorded to FM broadcast stations is limited solely to that which results from the station separation requirements and other rules as defined by Section 73.209 of the Commission's Rules.

[12] The proposed separation table represents a 1 mV/m protected service radius of 23 kilometers (14.5 miles) for Class A, 36 kilometers (22 miles) for Class B1, 53 kilometers (33 miles) for Class B, 73 kilometers (45 miles) for Class C1, and 92 kilometers (57 miles) for Class C. The signal to interference ratios used to determine allowable interference were left unchanged at 10:1 for co-channel stations and 2:1 for first-adjacent channel stations. The second-adjacent and third-adjacent channel separations again represent a replacement service by requiring separation between stations corresponding to the service radius only. All calculations were rounded off

allowing Class A assignments on Class B-C channels, the Commission undertook some preliminary studies to determine the impact of adding intermediate classes of stations. We applied the proposals contained herein to three communities in the United States: Rock Hill, South Carolina (population 33,846); Delaware, Ohio (population 15,008); and Rock Falls, Illinois (population 10,287).[13] These communities were randomly selected from a large group which now have no FM assignments; no FM channels presently available for assignment; and a relatively large population. This study did not consider whether there was a demand for an assignment at these communities; whether the community deserves an assignment; or whether other communities would be precluded from obtaining an assignment. Our primary concern was the impact the creation of additional station classes would have on our ability to make additional FM assignments. The results of these studies are tabulated in Table III.

19. We discovered that merely allowing Class A assignments on Class B-C channels, as proposed by Laurinburg and Bergen, would not provide an available assignment for Rock Hill. However, if five classes of stations were considered (the existing classes plus the two additional ones proposed) and all present stations were reclassified according to their present operating facilities, a Class B channel could be assigned to all three communities. This would be the only means of providing Rock Hill, South Carolina, with an FM assignment.

20. Our investigation into the effects of adding more classes of stations was limited because the time required to complete each study is lengthy and substantial hand examination must be made in each case. However, the Commission feels that the indications of merits are strong enough for us to propose rules which would add more classes of stations. We shall continue our evaluation of the effects of these proposed changes as this proceeding advances. We desire comments which might better show the potential (or lack thereof) in total numbers of assignments such a proposed allocation structure could have.

21. Interested persons desiring an FM assignment at a specific community that would be available only under the proposed rules should not submit a petition for rule making to amend the FM Table of Assignments (Section 73.202(b)) during the comment period. Rather they should wait until a decision is made in this proceeding. Assuming positive Commission action, the request would then be made through the normal "petition" procedure (see Section 1.401 *et al.*)

22. The attached Appendix does not contain a proposed revision of Section 73.213 (dealing with short-spaced stations). The Commission recognizes that this section must be revised to reflect the five classes of

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to the nearest kilometer.

[13] Population figures are taken from the 1970 U.S. Census.

stations. However, no proposal is being made at this time. Consideration of these rules will commence, if necessary, at a later date.

23. Accordingly, IT IS PROPOSED TO AMEND Part 73 of the Commission's Rules and Regulations as set forth in the attached Appendix.

24. Authority for the actions taken herein is contained in Sections 4(i), and 303(a), (b), (f) and (g) and (r) of the Communications Act of 1934, as amended.

25. Pursuant to procedures set out in Sections 1.4, 1.415, and 1.419 of the Commission's Rules and Regulations, interested parties may file comments on or before June 13, 1980, and reply comments on or before August 13, 1980. All submissions by parties to this proceeding or persons acting on behalf of such parties must be made in written comments, reply comments, or other appropriate pleadings.

26. In accordance with Section 1.419 of the Commission's Rules and Regulations, an original and five copies of all comments, reply comments, pleadings, briefs, or other documents shall be furnished the Commission. Members of the general public who wish to participate informally in the proceeding may submit one copy of their comments, specifying docket number BC 80-90.

27. All filings made in this proceeding will be available for examination by interested parties during regular business hours in the Commission's Public Reference Room at its headquarters, 1919 M Street, N.W., Washington, D.C.

28. For further information concerning this proceeding contact Kathryn Hosford, Broadcast Bureau, (202) 632-9660. However, members of the public should note that from the time a Notice of Proposed Rule Making is issued until the matter is no longer subject to Commission consideration or court review, *ex parte* contacts presented to the Commission in proceedings such as this one will be disclosed in the public docket file.

29. An *ex parte* contact is a message (spoken or written) concerning the merits of a pending rule making other than comments officially filed at the Commission or oral presentations requested by the Commission. If a member of the public does wish to comment on the merits of this proceeding in this manner, he or she should follow the Commission's procedures governing *ex parte* contacts in informal rule making. A summary of these procedures is available from the Commission's Consumer Assistance Office, FCC, Washington, D.C. 20554 (202-632-7000).

FEDERAL COMMUNICATIONS COMMISSION,*
WILLIAM J. TRICARICO, *Secretary.*

Attachment: Appendices

* See attached Statement of Chairman Ferris and Concurring Statement of Commissioner Brown.

TABLE I

Minimum Distance Requirements Per Frequency Separations
In kilometers (miles)

Relation	Co-channel	200 kHz	400 kHz	600 kHz
A to A	98 (61)	58 (36)	23 (14)	23 (14)
A to B1	130 (81)	79 (49)	36 (22)	36 (22)
A to B	161 (100)	102 (63)	53 (33)	53 (33)
A to C1	196 (122)	129 (80)	73 (45)	73 (45)
A to C	222 (138)	160 (99)	92 (57)	92 (57)
B1 to B1	143 (89)	92 (57)	36 (22)	36 (22)
B1 to B	174 (108)	115 (72)	53 (33)	53 (33)
B1 to C1	209 (130)	142 (88)	73 (45)	73 (45)
B1 to C	235 (146)	173 (108)	92 (57)	92 (57)
B to B	191 (119)	131 (81)	53 (33)	53 (33)
B to C1	225 (140)	158 (98)	73 (45)	73 (45)
B to C	251 (156)	189 (118)	92 (57)	92 (57)
C1 to C1	245 (152)	178 (111)	73 (45)	73 (45)
C1 to C	271 (168)	210 (131)	92 (57)	92 (57)
C to C	290 (180)	229 (142)	92 (57)	92 (57)

NOTE 1: The distance between stations of different classes apply regardless of which is the proposed station under consideration (*e.g.*, distances shown from a new Class A station to an existing Class C station represent the same distance as that between a new Class C and an existing Class A station).

NOTE 2: The mileage requirements of §73.207 for stations or assignments separated in frequency by 10.6 or 10.8 MHz (53 or 54 channels) will not be addressed in this proceeding. Classes B1 and C1 will abide by the requirement of Classes B and C, respectively, in these instances.

NOTE 3: Except within the Mexican border area (320 kilometers or 199 miles of the common border), Class D (secondary) assignments will be governed by §73.509. All assignments within the border area (including Class D) must abide by the separation table as stated in §73.504(c).

TABLE II

Effects of Allowing Class A
Assignments on Class B-C Channels

Area	Description	Zone	Present Availability[1]	Proposed Availability[2]
1	Northern Maine	II	99%	100%
2	Eastern Maine	I&II	100%	100%
3	Western Maine	I&II	54%	91%
4	Northern NY/VT	I	57%	97%
5	Western NY/PA	I	30%	71%
6	PA/OH/WV	I	11%	36%
7	Ohio	I	12%	60%
8	OH/IL	I	5%	81%
9	Southern Michigan	I	2%	41%
10	Central Michigan	II	50%	97%

[1] Represents that percentage of geographic area which isavailable for further FM assignments under the present allocationscheme.
[2] Represents that percentage of geographic area which would beavailable for further FM assignments if Class A assignments wereallowed on Class B-C channels.

TABLE III

Availability of Assignments
(for three communities under the proposed revisions)

Community:	Rock Hill, S.C.	Delaware, Oh.	Rock Falls, Ill.
Population: (1970 Census)	33,846	15,008	10,287
Present Local Aural Service:	WTYC(AM) Daytime WRHI(AM) Fulltime WPRV(FM) Educational	WDLR(AM) Daytime WSLR(FM) Class D	None
Availability under present structure:	-0-	-0-	-0-
if Class A on B-C Channels:	-0-	254A, 282A, 300A	236A, 299A
if Class B in Zone II:	-0-	NA	NA
if five classes of stations*	225B1, 291B	254B	263B

* Assumes reclassification of present stations:

For Rock Hill, S.C., of 90 Class C assignments that are within the area of consideration, 34 stations would be reclassified as Class C1, 15 would become Class B, 9 would become Class B1, and 1 would become a Class A station.

For Delaware, Ohio, of 168 Class B assignments that are within the area of consideration, 14 would be reclassified as Class B1. Of 4 Class C assignments within the area, 2 would become Class C1 and 2 would become Class B stations.

For Rock Falls, Ill., of 80 Class B assignments that are within the area of consideration, 9 would be reclassified as Class B1. Of 22 Class C assignments within the area, 13 would become Class C1 and 4 would become Class B stations.

APPENDIX

1. Section 73.202(a) is proposed to be modified to read as follows:

§73.202 Table of Assignments.

(a) General. The following Table of Assignments contains the channels (other than noncommercial educational channels) assigned to the listed communities in the United States, its territories and possessions. Channels designated with an "A" are for Class A FM stations. All other listed channels are for Class B stations in Zones I and I-A and for Class C stations in Zone II *unless otherwise designated.* Channels designated with an asterisk are assigned for use by noncommercial educational broadcast stations only. There are specific noncommercial educational FM assignments (Channels 201–220) for various communities in Arizona, California, New Mexico, and Texas. These are set forth in §*73.504.*

* * * * * * *

2. Section 73.203(b) is proposed to be modified as follows:

§73.203 Availability of channels.

(a) * * *

(b) A channel assigned to a community listed in the Table of Assignments is available upon application *to* any unlisted community which is located within *16 kilometers (9.9 miles)* of the listed community if the channel requested is a Class A *assignment* and *24 kilometers (14.9 miles)* if the channel is a Class *Bi, B, C1, or C assignment,* provided no other channel in the listed community has been similarly assigned to another community and provided further that the unlisted community has not already removed a channel from any other listed community. Where channels are assigned to two or more communities listed in combination in the Table of Assignments the provisions of this paragraph shall apply separately to each community so listed. The distance between communities shall be determined by the distance between the respective coordinates thereof as set forth in the publication of the *United States Department of the Interior, entitled "Index to The National Atlas of the United States of America, 1970." (This publication may be purchased from the Department of the Interior, Geological Survey, Washington, D.C. 20244.)* If said publication does not contain the coordinates of either or both communities, the coordinates of the main post office in either or both of the communities shall be used. The method to be followed in making the measurements is set forth in §73.208(c).

3. Section 73.206(a)(2), b(1), (2) and (4) is proposed to be modified to read as follows:

§73.206 Classes of commercial channels, and stations operating thereon.

(a) * * *

(1) * * *

(2) A Class A station is a station which operates on a Class A channel *if available, but which may otherwise operate on a Class B-C channel,* and is designed to render service to a relatively small community, city, or town, and the surrounding rural area.

(3) * * *

(b) *Class B, B1, C and C1 channels and stations.*

(1) Except for the channels specified in paragraph (a)(1) of this section, all of the channels listed in §73.201 from 222 through 300 (92.3 through 107.9 MHz) are classified as Class B-C channels, and (subject to the restrictions set forth in §73.204) *may be used by Class A, B1, and B in Zones I and I-A and by all class in Zone II* (there are no Class *C1 or C* stations in Zones I and I-A).

(2) Class *Bi and* B station is a station which operates on a Class B-C channel in Zone I, I-A, *or Zone II* and is designed to render service to a sizable community, city, or town, or to the principal city or cities of an urbanized area, and to the surrounding area.

(3) * * *

(4) A Class *C1 and* C station is a station which operates on a Class B-C channel in Zone II, and is designed to render service to a community, city, or town, and large surrounding area.

* * * * * * *

4. Section 73.207(a) is proposed to be modified to read as follows:

§73.207 Minimum distance separation between stations.

(a) Petitions to amend the Table of Assignments (§73.202(b)) (other than those expressly requesting amendment of this Section or §73.205) will be dismissed and no application for a new station, or change in the channel or location of an existing station, other than a Class D (secondary) station, will be accepted for filing, unless the proposed facilities will be located at least as far from the transmitter sites of other co-channel and adjacent channel stations (both existing and proposed) as the distances in *kilometers (miles)* specified in this paragraph. Proposed stations of the respective classes shown in the left-hand column of the following *tables* shall be located no less than the distance shown from co-channel stations, and first adjacent-channel stations (200 kHz removed), second and third adjacent-channel stations (400 and 600 kHz removed), *and separated by 53 or 54 channels (10.6 or 10.8 MHz removed)* in the remaining columns of the table. The distances shown between stations of different classes apply regardless of which is the proposed station under consideration (e.g., distances shown from a new Class A station to an existing Class C station are also the distances between a new Class C and an existing Class A station).

(1) *The following distance separations for channel assignments within the United States (between domestic assignments) must be adhered to.*

Minimum Distance Separation Requirements
in kilometers (miles)

Relation	Co-channel	200 kHz	400 kHz	600 kHz	10.6/10.8 MHz
A to A	98 (61)	58 (36)	23 (14)	23 (14)	8 (5)
A to B1	130 (81)	79 (49)	36 (22)	36 (22)	16 (10)
A to B	161 (100)	102 (63)	53 (33)	53 (33)	16 (10)
A to C1	196 (122)	129 (80)	73 (45)	73 (45)	32 (20)
A to C	222 (138)	160 (99)	92 (57)	92 (57)	32 (20)
B1 to B1	143 (89)	92 (57)	36 (22)	36 (22)	24 (15)
B1 to B	174 (108)	115 (72)	53 (33)	53 (33)	24 (15)
B1 to C1	209 (130)	142 (88)	73 (45)	73 (45)	40 (25)
B1 to C	235 (146)	173 (108)	92 (57)	92 (57)	40 (25)
B to B	191 (119)	131 (81)	53 (33)	53 (33)	24 (15)
B to C1	225 (140)	158 (98)	73 (45)	73 (45)	40 (25)
B to C	251 (156)	189 (118)	92 (57)	92 (57)	40 (25)
C1 to C1	245 (152)	178 (111)	73 (45)	73 (45)	48 (30)
C1 to C	271 (168)	210 (131)	92 (57)	92 (57)	48 (30)
C to C	290 (180)	229 (142)	92 (57)	92 (57)	48 (30)

(2) *Under the Canada-United States FM Broadcasting Agreement, the following*

separations to Canadian stations and assignments must be adhered to when within 402 kilometers (250 miles) of the common border. Class B1 assignments will be considered as Class B assignments when using this table.

Minimum Distance Separation Requirements
in kilometers (miles)

Relation	Co-channel	200 kHz	400 kHz	600 kHz
A to A	145 (90)	80 (50)	40 (25)	32 (20)
A to B	217 (135)	137 (85)	72 (45)	64 (40)
A to C1	241 (150)	161 (100)	105 (65)	97 (60)
A to C	241 (150)	193 (120)	121 (75)	113 (70)
B to B	249 (155)	169 (105)	97 (60)	72 (45)
B to C1	274 (170)	201 (125)	121 (75)	97 (60)
B to C	274 (170)	225 (140)	137 (85)	113 (70)
C1 to C1	306 (190)	225 (140)	145 (90)	113 (70)
C1 to C	306 (190)	249 (155)	169 (105)	121 (75)
C to C	306 (190)	257 (160)	169 (105)	129 (80)

NOTE: Under the Canada-United States Agreement, a short spacing of up to 8 kilometers (5 miles) in the direction of a related station may be considered acceptable depending on the circumstances of each individual case.

(3) Under the Mexican-United States FM Broadcasting Agreement, *the following separations to Mexican stations and assignments must be adhered to when within 320 kilometers (199 miles) of the common border. Class B1 and Class C1 stations and assignments should be considered as Class B and Class B stations and assignments, respectively, when using this table.*

Minimum Distance Separation Requirements
in kilometers (miles)

Relation	Co-channel	200 kHz	400 kHz	600 kHz	10.6/10.8 MHz
A to A	105 (65)	65 (40)	25 (15)	25 (15)	8 (5)
A to B	175 (110)	105 (65)	65 (40)	65 (40)	16 (10)
A to C	210 (130)	170 (105)	105 (65)	105 (65)	32 (20)
A to D	95 (60)	50 (30)	25 (15)	25 (15)	8 (5)
B to B	240 (150)	170 (105)	65 (40)	65 (40)	25 (15)
B to C	270 (170)	215 (135)	105 (65)	105 (65)	40 (25)
B to D	170 (105)	95 (60)	65 (40)	65 (40)	16 (10)
C to C	290 (180)	240 (150)	105 (65)	105 (65)	48 (30)
C to D	200 (125)	155 (95)	105 (65)	105 (65)	25 (15)
D to D	18 (11)	10 (6)	5 (3)	5 (3)	3 (2)

5. Section 73.211(a)(1), (2), (3), (b)(1) and (d) are proposed to be modified to read as follows:

§73.211 Power and antenna height requirements.

(a) Minimum requirements.

(1) Except as provided in paragraph (b)(2) of this section, the minimum effective radiated power shall be:

Class A	greater than or equal to 100 watts (-10 dBk)
Class B1	greater than 3 kW (4.8 dBk)
Class B	greater than 20 kW (13 dBk)
Class C1	greater than 50 kW (17 dBk)
Class C	equal to 100 kW (20 dBk)

(2) *A minimum antenna height above average terrain is specified only for Class C stations and must exceed 305 meters (1000.66 feet).* No minimum antenna height above average terrain is specified *for Class A, B1, B, or C1 stations.*

(3) *A newly authorized Class C station may operate for up to six (6) years from the issuance of a license with the facilities of a Class C1 assignment, and still maintain a Class C assignment classification. At the expiration of the 6 year period the Class C station must conform to the minimum requirements of this section or be reclassified to a Class C1 assignment.*

(b) Maximum power and antenna height.

(1) The maximum effective radiated power in any direction and maximum antenna height for equivalence purposes, shall be as follows for the various classes of stations:

Class	Maximum Power	Maximum antenna height (above average terrain) in meters (feet)
A	3 kW (4.8 dBk)	92 (301.84)
B1	20 kW (13.0 dBk)	92 (301.84)
B	50 kW (17.0 dBk)153 (501.97)	
C1	100 kW (20.0 dBk)	305 (1000.66)
C	100 kW (20.0 dBk)	610 (2001.31)

(2) * * *

(3) * * *

(c) * * *

(d) Existing stations.

(1) Stations authorized as of September 10, 1962 which do not conform to the requirements of this section, may continue to operate as authorized. For stations operating with facilities in excess of those specified in paragraph (b) of this section, no change in facilities will be authorized which either increases the effective radiated power or extends the location of the 1 mV/m field strength contour beyond that of the present authorization in any direction. The provisions of this section shall not apply to applications to increase facilities for those stations operating with powers less than the minimum powers specified in paragraph (a) of this section.

(2) *Stations authorized as of which do not conform to the requirements of this section, may continue to operate as authorized for a period of three years. All renewals*

of stations authorized as of will be at their present classification, with the condition that they conform to the requirements of this section or be reclassified on .

6. Figure 3 of Section 73.333 is revised as follows:

§73.333 Engineering charts.

This Section consists of the following Figures 1, 1A, 2 (slider), 3, 4, and 5.

(a) *Figure 3 is composed entirely of straight lines which can be computed using the following equations:*

(1) for Class A

if $H \leq 92$ meters (301.84 feet) then $P = 4.8$ dBk
if $H > 92$ meters (301.84 feet) then $P = 42.97\text{-}19.44 \log H$

(2) for Class B1

if $H \leq 92$ meters (301.84 feet) then $P = 13$ dBk
if $H > 92$ meters (301.84 feet) then $P = 54.56\text{-}21.17 \log H$

(3) for Class B

if $H \leq 153$ meters (501.97 feet) then $P = 17$ dBk
if $H > 153$ meters (501.97 feet) then $P = 65.55\text{-}22.22 \log H$

(4) for Class C1

if $H \leq 305$ meters (1000.66 feet) then $P = 20$ dBk
if $H > 305$ meters (1000.66 feet) then $P = 77.56\text{-}23.17 \log H$

(5) for Class C

if $H \leq 610$ meters (2001.31 feet) then $P = 20$ dBk
if $H > 610$ meters (2001.31 feet) then $P = 78.38\text{-}20.96 \log H$

where

H = antenna height above average terrain in meters.
P = maximum power allowed in dBk.

These equations take precedence over Figure 3.

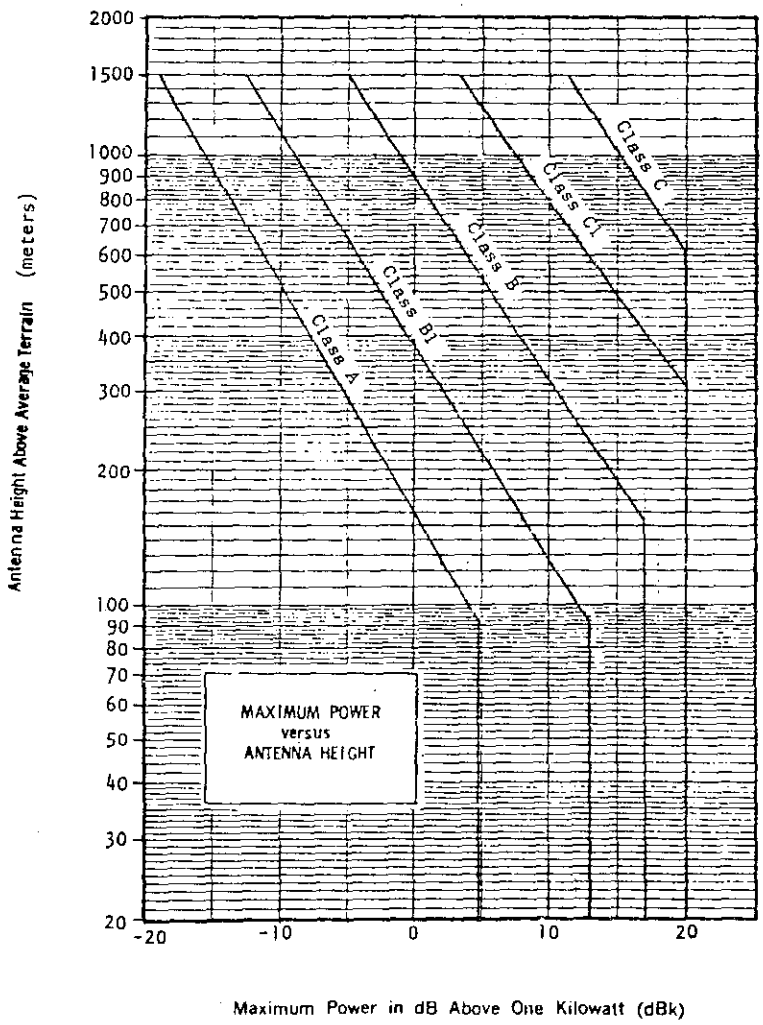
* * * * * * *

7. Section 73.507(a) reference to Class D stations is deleted as follows:

§73.507 Minimum distance separation between stations.

(a) Minimum distance separations. No application for a new station, or change in channel or transmitter site or increase in facilities of an existing station, will be granted unless the proposed facilities will be located so as to meet the adjacent channel distance separations specified in §73.207(a) for the class of station involved with respect to assignment on Channels 221, 222 and 223 listed in §73.201 (except where, in the case of an existing station, the proposed facilities fall within the provisions of §73.207(b)).

* * * * * * *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Antenna Height Above Average Terrain (meters)
Maximum Power in dB Above One Kilowatt (dBk)
Class A
Class B1
Class B
Class C1
Class C
MAXIMUM POWER
versus
ANTENNA HEIGHT