

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

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In the Matter of)

Revitalization of the AM Radio Service)

First Report And Order, Further Notice of) MB Docket No. 13-249
Proposed Rule Making and Notice of Inquiry,)
Revitalization of the AM Radio Service)

To: The Commission

COMMENTS OF AM BROADCAST LICENSEES

Charles A. Hecht & Associates, Inc. (“Hecht Associates”), pursuant to FCC Rule Section 1.401, submits comments on behalf of AM Broadcast Licensees (AMBL) on the above captioned Notice of Proposed Rule Making (“NPRM”) wherein the FCC seeks to investigate possible changes to its rules which would allow AM broadcasters to better serve the public.

Introduction

AMBL is comprised of a group of 58 AM radio station licensees which operate 129 AM stations throughout the United States¹. Hecht Associates is a broadcast engineering consulting firm which has represented the technical needs of hundreds of AM stations before the FCC almost 40 years. During this time, we have observed a gradual increase in electrical noise interference on the AM band which has adversely affected the ability to listen to AM broadcasts. Frequently, station owners tell us that they used to be able to hear their station in a certain area and now can no longer do so. As the noise floor has increased, so has the signal strength necessary for “interference free” listening. A significant part of the decline in AM listenership is attributable to the increased interference and poor audio quality obtained from narrow band receivers that were designed to minimize the interference. Listening conditions at night are worse, as a number of stations, many of which provide the sole source of local programming in

¹ See Appendix

their communities, must reduce power or go off the air to enable distant stations to operate with maximum nighttime power. The problem is compounded by increased competition from alternative listener options, including unlicensed program services employing Wi-Fi and internet delivered radio, which have the same signal quality and range day and night. Despite a heavy focus on diverse program content meeting the needs of local communities, the future of AM radio is cloudy. Many of the proposals found in the current NPRM show great potential benefit for AM stations as they would provide for stronger day and night signals. AMBL offers the following comments in support of specific proposals in the NPRM. Paragraph numbers referenced in the following Comments are those found in the Public Notice Released October 23, 2015.

Section A. Modify AM Protection Standards

At paragraph 49, the FCC introduces modification of the AM protection standards. At paragraph 56, the FCC proposes the following changes to the protection standards for Class A stations:

“We tentatively conclude, therefore, that (1) all Class A stations should be protected, both day and night, to their 0.1 mV/m groundwave contour, from co-channel stations; (2) all Class A stations should continue to be protected to the 0.5 mV/m groundwave contour, both day and night, from first adjacent channel stations; and (3) the critical hours protection of Class A stations should be eliminated completely.”

AMBL believes, as stated by many commenters in this proceeding, that the existing level of interference in the AM band makes listening to a 0.1 mV/m (100 microvolts) signal nearly impossible in many areas and therefore believes that the limit of protected service for Class A stations, both day and night should be the 0.5 mV/m ground wave contour for co-channel operation and be consistent with the protection levels set for Class B, C and D stations on adjacent channels as addressed herein. Even in the absence of electrical interference, there are significant numbers of receivers that are incapable of producing a signal to noise ratio satisfactory for reliable quality listening with a signal of 0.1 mV/m. It simply does not make sense to protect a signal strength contour that in reality is more theoretical than useful. AMBL concurs in the Commission’s recommendation that critical-hours protection for Class A stations should be completely eliminated.

As of December 31, 2015, the FCC reported there were 4,684 AM stations. Of these stations, 73 stations are Class A, which represents 1.6% of the total number of AM stations. The genesis of the Class A channels² lies in the Radio Act of 1927 and the creation of the Federal Radio Commission (FRC) which was the predecessor to the FCC. Today, there are numerous program choices available on FM radio, satellite radio, Wi-Fi, the internet and cellular radio handsets. These quality, reliable, program sources are in sharp contrast to the sporadic nature of regularly fading skywave signals transmitted Class A stations experienced on the AM band today. The reasons for establishing Class A protection standards 89 years ago in 1927 are no longer valid in 2016. It is reasonable to believe that if protection to Class A skywave service were to cease that the public interest would be better served by the many local stations who could meet the needs of their community who are currently deprived of any nighttime local AM service opportunity because of Class A skywave protection requirements. The FCC has historically championed the values of local community service and eliminating skywave protection would clearly be in the public interest.

Section A. 2. Change Nighttime RSS Calculation Methodology

At paragraph 62, the FCC proposed modified nighttime protection standards which are much more in keeping with the nighttime allocation rules employed by our neighbors in Canada and Mexico:

“We therefore tentatively conclude that we should roll back the 1991 rule changes as they pertain to calculation of nighttime RSS values of interfering field strengths and nighttime interference free service. We propose to amend Section 78.182(k) of the Rules to return to predicting the nighttime interference-free coverage area using only the interference contributions from co-channel stations and the 50 percent exclusion method.”

AMBL supports the removal of adjacent channel protection requirements in the calculation of nighttime interference and the protection of stations at any RSS level other than the 50% RSS. The Commission itself gives the most powerful reason possible for making this change when it states “... the rules have impeded facility improvements that are more necessary now than 24 years ago, because the noise floor has increased as much as or more than station-to-station interference, and increasing signal strength to a

² Class A channels were formerly designated as clear channels.

station’s primary service area has become more of a priority than maintenance of rules that offer a small return on interference reduction, compared to the burden they impose on signal improvement.”

Section A. 3. Change Daytime Protection to Class B, C and D Stations

At paragraphs 63 – 65, the FCC proposes to maintain the current 26 dB D/U (desired to undesired) daytime co-channel protection ratio and return to the 0 dB D/U first and second adjacent channel protection ratio in place prior to 1991 and remove third adjacent channel protection requirements. The daytime contour to be protected would be the 2 mV/m contour for co and first adjacent channel stations and the 25 mV/m contour for second adjacent channel stations.

AMBL supports these changes but does believe that Class A stations should be protected as is proposed for Class B, C and D stations on first adjacent and second adjacent channels but protected to the 0.5 mV/m contour by other co-channel stations.

Summary of Daytime Proposed Allocation Changes to be found in 73.37(a)

Revise paragraph (a) of Section 73.37 to read as follows:

§ 73.37 Applications for broadcast facilities, showing required.

(a) * * *

Frequency Separation (kHz)	Contour of proposed station (classes B, C and D) (mV/m)	Contour of any other station (mV/m)
0	0.025	0.500 (Class A)
	0.100	2.0 (Other classes)
	2.0	0.100 (Other classes)
10	2.0	2.0 (Class A)
	2.0	2.0 (Other classes)
20	25.0	25.0 (All classes)

Daytime and Nighttime Proposed Allocation Changes as Found in 73.182(o)

The above changes can be summarized by reference to Rule Section 73.182(o) which should look like this:

Class of station	Class of channel used	Signal strength contour of area protected from objectionable interference ($\mu\text{V/m}$)		Permissible interfering signal ($\mu\text{V/m}$)	
		Day - GW	Night - GW	Day-GW	Night
A	Clear	SC 500 AC 2000	SC 500 AC 2000	SC 25 AC 2000	SC 25 SW AC 2000 GW
B	Regional	2000	2500 or NIF if >	SC 100 AC 2000	20:1 10%SW Not presc.
C	Local	2000	Not presc.	SC 100	Not presc.
D	Regional	2000	Not presc.	SC 100 AC 2000	Not presc. Not presc.

Section B. Revise Rule on Siting of FM Cross-Service FILL-IN Translators

AMBL supports the Commission’s position as found in paragraph 68 with respect to keeping the fill-in cross-service translator service area within the core market area of the AM station. Extending the translator 60 dBu contour radius to 40 miles (60 kilometers) is necessary as the present rule does not account for the high conductivity found predominantly in the middle of the country and the needs of those stations. We encountered this problem several times when conducting translator allocation studies for stations located in the middle of the country.

Here are two examples. The highest ground conductivity in the U.S. is 30 millisiemens. A 50 kilowatt station with a 5/8 wave antenna on 540 kHz and a conductivity of 30 millisiemens would have a 2 mV/m contour that extends 384 kilometers. The area of 30 millisiemen ground conductivity extends from Dallas north into central Nebraska. At 1000 kHz the contour distance is 225 kilometers and at 1600 kHz the contour distance is 138 kilometers.

Admittedly, the first example presents a worst case scenario. But let’s take a look at a more typical example. A 15 millisiemen conductivity (or higher) stretches through almost all of the central U.S. from the Mexican border to the Canadian border. Picking a more modest 5 kilowatt power level and standard 90 degree quarter wave antenna, the distances to the contour with a conductivity of 15 are 146 kilometers at 540 kHz, 84 kilometers at 1000 kHz and 52 kilometers at 1600 kHz.

This example demonstrates the proposed rule modification to a 40 mile radius is needed as the present rule does not recognize the practical extent of AM 2 mV/m service in the central U.S.. Expansion of the limit to 40 miles as proposed would provide greater flexibility to AM operators desiring to locate their FM translators in locations where they determine would best serve their “core” audience while still being within the primary AM’s 2 mV/m contour.

Section C. Modify Partial Proof of Performance Rules

At paragraph 70, the Commission proposes to modify section 73.154(a) to reduce the number of required radials to be measured believing that this change will not result in AM directional antenna systems being out of adjustment as a result of this change. AMBL agrees with the Commission’s conclusion and supports the change.

Section D. Modify Rules for Method of Moments Proofs

At paragraph 72, the Commission lists seven changes to the Method of Moments (MoM) Proof Rules which are based on years of processing MoM license applications and commenter’s input. At paragraph 73, the FCC proposes to implement the seven procedural and rule changes with the exception of the elimination of reference field strength measurements. AMBL agrees with the Commission’s conclusion and supports the proposed changes including retaining the biannual field strength measurements. The measurements serve as a real world verification of the performance of the entire antenna system.

Conclusion

The daytime allocation changes proposed herein should do a great deal to help stations improve their coverage and possibly increase power. Many stations with complex directional patterns will be able to reduce the depth of pattern nulls and possibly reduce the number of towers in a directional array. The nighttime allocation changes proposed, most importantly limiting RSS night calculations to 50%, removing adjacent channel stations from the RSS calculation, deleting protection to Class A station 0.5 mV/m skywave contours while fully protecting the nighttime 0.5 mV/m groundwave contour, should allow Class D and B stations to gain night service or improved night service. These benefits are significant.

We thank the FCC for continuing a proceeding that will help AM broadcasters to more effectively serve the public.

Respectfully submitted,

CHARLES A. HECHT & ASSOCIATES, INC.

By: _____ /s/
Charles A. Hecht, President
March 18, 2016

APPENDIX

LICENSEES AND STATIONS REPRESENTED
BY AM BROADCAST LICENSEES (AMBL)

-3-

<u>LICENSEE</u>	<u>STATION</u>
32 Cajun Radio Corporation	53 WCPC Houston, MS
33 New England Communications, Inc.	54 WBXR Hazel Green, AL
34 Bob Wilkins Radio Network Broadcasting, Inc.	55 KERI Bakersfield, CA
35 Heritage Christian Radio, Inc.	56 WBRI Indianapolis, IN
36 Steel City Radio, Inc.	57 WWNL Pittsburgh, PA 58 WYYC York, PA 59 WITK Pittston, PA
37 Kansas City Radio, Inc.	60 KCNW Fairway, KS
38 Macon Media, Inc.	61 WSKY Asheville, NC
39 J. J. & B. Broadcasting, Inc.	62 WFAM Augusta, GA
40 Upstate Radio, Inc.	63 WELP Easley, SC
41 Grace Media, Inc.	64 WLMR Chattanooga, TN
42 Steven J. Callahan	65 WVBF Middleboro. Ctr.,MA
43 Gois Broadcasting LLC	66 WORC Worcester, MA
44 Gois Broadcasting Boston, LLC	67 WAMG Dedham, MA 68 WLLH Lowell, MA
45 Gois Broadcasting of Connecticut, LLC	69 WKND Windsor, CT 70 WNEZ Manchester, CT
46 Logan Radio Incorporated	71 WRUS Russellville, KY
47 Colonial Radio Group of Williamsport, LLC	72 WLYC Williamsport, PA 73 WEJS Jersey Shore, PA 74 WWGE Loretto, PA
48 Caribbean Radio Group, Inc.	75 WPOM Riviera beach, FL 76 WIRA Fort Pierce, FL