

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

In the Matter of )  
)  
Amendment of Part 97 of the Commission's ) **WT Docket No. 04-140**  
Rules Governing the Amateur Radio Services )  
)  
Amendment of Section 97.111 of the Amateur )  
Radio Service Rules to Limit Transmissions of )  
Information Bulletins )  
)  
Conforming Amendments to Part 97 of the )  
Commission's Rules to Implement the World )  
Radio Conference 1997 Final Acts )  
)  
Amendment of Part 97 to Provide Color-coded )  
License Documents )  
)  
Amendment of Part 97 to Allow Instant )  
Temporary Licensing )  
)  
Amendment of the Amateur Service Rules to )  
Limit One-Way Voice Broadcasting on )  
Frequencies Allocated to the Amateur Service )  
)  
Amendment of Sections 97.111 and 97.113 of )  
The Commission's Rules to Curb Certain )  
Abuses in the Amateur Radio Service )  
)  
Amendment of Section 97.3(a)(26) to Establish )  
Two Classifications of Information Bulletins )  
)  
Amendment of Section 97.305(c) to Authorize )  
Image Emissions in Additional High Frequency )  
Segments )

**To: The Commission**

**PETITION FOR PARTIAL RECONSIDERATION**

ARRL, the National Association for Amateur Radio, also known as the American Radio Relay League, Incorporated (ARRL), by counsel and pursuant to Section 1.429 of the Commission's rules (47 C.F.R. §1.429), hereby respectfully requests that the Commission

reconsider and modify a portion of the *Report and Order* (the R&O), FCC 06-149, released October 10, 2006, 71 Fed. Reg. 66460 *et seq.* The R&O amended Parts 1, 2 and 97 of the Commission's rules governing the Amateur Radio Service to modernize, streamline and remove unnecessary restrictions on Amateur Service licensees in a number of disparate respects. Among these amendments was the revision of the frequency segment of the 80-meter Amateur Service High Frequency (HF) band on which Amateur stations are authorized to transmit telephony (voice) communications. In several respects, the extent of this action in particular created unintended consequences which, if not corrected, will be <sup>1</sup> substantially adverse to the interests and ongoing contributions to the radio art of a significant and growing number of Amateur Radio licensees. As good cause for this Petition for Partial Reconsideration, <sup>2</sup> ARRL states as follows:

### **I. Introduction**

1. The R&O in this matter was indeed welcome, generally speaking. This proceeding was commenced in April of 2004, and consolidated for consideration a number of rulemaking petitions dating from May of 2001. The R&O was eagerly awaited by large numbers of Amateur Radio Service licensees, and it was not a disappointment. The subjects of this proceeding are varied; the consolidated petitions for rule making addressed largely unrelated service rule changes that were, as proposed in the Notice of Proposed Rule Making ( the "Notice") primarily non-controversial. The rule changes proposed were in the nature of a "biennial review" of the Amateur Service Rules. There were several actions taken in the proceeding that will greatly improve the efficiency of Amateur Radio's

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<sup>1</sup> The effective date of the new and modified rules adopted in the R&O is December 15, 2006. ARRL is contemporaneously filing a very limited Petition for Partial Stay of a portion of one of the new rules as discussed herein, in order to maintain the *status quo ante* pending the Commission's review of this Petition for Reconsideration.

<sup>2</sup> This Petition is timely filed. The R&O was published in the Federal Register on November 15, 2006. Petitions for reconsideration, therefore, are due not later than December 15, 2006 pursuant to Section 1.429(d) of the Commission's Rules.

use of the high frequency (HF) spectrum; facilitate emergency communications capabilities; and permit the use of efficient new technology for remote control of fixed Amateur stations. These actions will improve the Amateur Service's already effective response capabilities in wide-area, disaster relief communications, such as those provided in the aftermath of Hurricanes Katrina, Wilma and Rita just over a year ago. The new and modified rules also eliminate unnecessary restrictions on manufacturers of Amateur Radio equipment, and in general, expand the radio Amateur's ability to experiment with new digital technologies.

2. Indeed, therefore, ARRL is supportive of the R&O overall, and appreciates the Commission's actions, and its support of the Amateur Service reflected in the R&O. In a proceeding of this wide scope and varied subject matter, there were understandably some minor errors, such as that which the Commission's Wireless Telecommunications Bureau timely corrected in the *Erratum*, DA 06-2379, released November 27, 2006, and otherwise.

3. There remains, however, one matter of substantial concern. The R&O creates consequences that the Commission clearly did not intend, in the course of a very substantial and unexpected expansion of the 80-meter telephony subband. Specifically, in the relocation of the "dividing line" between the RTTY/data/ telegraphy (narrowband) segment and the telephony/image/telegraphy (wideband) segment of the 3.500-4.000 MHz band from 3750 kHz to 3600 kHz,<sup>3</sup> the Commission has eliminated access to the 3620-3635 kHz segment by licensees who are currently conducting or using, or planning to conduct or use, automatically controlled, narrow-bandwidth digital communications, which are permitted in that segment now. That the prohibition of that access in the R&O is an unintended consequence of the very substantial telephony subband expansion at 80-meters (which was considerably greater than that proposed in the Notice), is manifest: the rule

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<sup>3</sup> See, the R&O, Appendix, Rule Section 97.301(b), and the text, at Paragraph 11.

section <sup>4</sup> permitting automatically controlled narrow bandwidth digital communications in the 3620-3635 kHz segment was unchanged by the R&O. However, the deletion of RTTY and data as permitted emissions in the 80-meter band segment above 3600 kHz completely precludes the operation of automatically controlled, narrowband data stations in the 3620-3635 kHz segment. It is this one circumstance that ARRL urges the Commission to correct on reconsideration. ARRL asks specifically that the Commission relocate the dividing line between the narrowband segment and the wideband segment of the 3.500-4.000 MHz band from 3600 kHz to 3635 kHz.

## **II. The Expansion of the 80-Meter Telephony Subband Was Greater Than Necessary And Created Unintended Adverse Consequences**

4. The expansion of the telephony subbands in the HF Amateur allocations in the R&O was the result of ARRL's request (RM-10413, filed March 22, 2002) that the Commission "refarm" the telegraphy subbands reserved for Novice and Technician Plus class licensees. ARRL's theory, which was supported by a 2001 survey of the views of licensed radio Amateurs (which resulted in 4,744 responses), was that the Novice and Technician Plus class telegraphy subbands at 80, 40, 15 and 10 meters were significantly underutilized, while at the same time the other portions of the HF bands were overcrowded. The ARRL Petition called for refarming of these subbands, and, based on the extensive input of the respondents to the ARRL survey, some expansion of the subbands used for telephony and image emissions. The survey, completed in late 2001, reflected statistically valid results that revealed clear preferences for the determination of the proper subband configurations, especially in the overcrowded 80- and 40-meter bands. ARRL's Petition stated, in relevant part:

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<sup>4</sup> See, Section 97.221(b) of the Amateur Service Rules.

As can be seen...the survey results by band show that most respondents (71.1 percent) prefer a restructuring of the 80-meter band such that the telephony (wideband) segment, which now includes the segment 3.75-4.00 MHz, be expanded to either 3.700 or 3.725 MHz, and that there be retained a 25 kHz segment for Amateur Extra Class licensees. ARRL proposes that of the two most popular configurations, the more cautious approach should be taken, and that the band be reconfigured as follows:

80-meters phone, image, cw:

General Class 3800 to 4000 kHz  
Advanced Class 3750 to 4000 kHz  
Extra Class 3725 to 4000 kHz

This would appear to take into account the extensive support for retaining a 25 kHz wideband segment for Extra Class licensees only, and at the same time substantially expand the crowded telephony subband. *However, it would also, importantly, preserve a substantial segment of the band for narrowband digital technologies* and to accommodate the increase in telegraphy from the addition of the Novice and Technician Plus licensees to the larger narrowband segment.

*ARRL Petition, RM-10413, at pp. 9-10 (emphasis added)*

Indeed, the encouragement of new, narrowband digital technologies was a principal goal of ARRL's Petition for Rule Making which led to the Notice of Proposed Rule Making in the instant Docket proceeding. ARRL summarized its "Refarming" proposal in RM-10413 as follows:

In essence, ARRL, with the support of almost 5,000 survey respondents, proposes to substantially expand the telephony, or wideband, segments of three of the HF Amateur allocations, though not in every case as extensively as the survey results would support. *ARRL believes that conversion to digital communications technologies in the Amateur Service is a critically important component of the future of Amateur HF communications. This conversion will be necessary in order to accommodate growth in the service and extension of Amateur leadership in the development and refinement of digital communications technology. While wideband telephony remains the most popular operating mode in the HF bands, and that preference is reflected in the survey results, there is a somewhat offsetting issue of importance in these regulatory changes, which is to preserve portions of the narrowband segments for narrowband data communications.* ARRL is convinced that its survey results are valid and substantially support the proposed changes discussed herein and as proposed in the attached Appendix. It is necessary, however, to proceed somewhat cautiously so as

to protect the minority of respondents concerned about adequate accommodation for narrowband data communications.

*Id.*, at pp. 12-13 (*emphasis added*)

5. The Notice in this proceeding, FCC 04-79, released April 15, 2004, applauded the ARRL's efforts to develop a comprehensive list of options and to present them generally to the Amateur Radio Service. The Notice favorably cited the "tremendous volume" of ARRL survey responses (as well as approximately 120 comments filed in response to the ARRL Petition), and, because the ARRL Refarming proposal "addresses the operating privileges of all classes of licensees on these amateur service bands", the Commission found that the ARRL Petition "provides a basis for a comprehensive restructuring of operating privileges." Specifically, at Paragraph 11 of the Notice, the Commission proposed to adopt the ARRL refarming proposal in its entirety and sought comment on it. It did so because, as it noted, "*no licensees would lose any spectrum privileges* and that General, Advanced and Amateur Extra Class licensees would gain spectrum for phone emissions, one of the most popular operating modes on the HF bands." (emphasis added). The Notice, therefore, proposed that the 80-meter telephony subband include 3,725-4,000 kHz.

6. In the R&O, the Commission reiterated that the reason it adopted the ARRL's proposal for telephony subband expansion and its comprehensive plan for refarming the Novice and Technician Plus subbands was that "the proposed rule revisions would result in no licensee losing any spectrum privileges..."<sup>5</sup> However, citing the comments of only ten individuals, the R&O, at paragraph 11, stated that the 80-meter telephony subband should be expanded to include 3600-4000 kHz:

Further, based on the record in this proceeding, we are persuaded that we should authorize more spectrum in the 80 m band for voice communications than was proposed in the NPRM. Indeed, a number of commenters argue

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<sup>5</sup> R&O, at paragraph 9.

that the NPRM proposal to increase the amount of spectrum permitted for voice communications would still not meet the demand for voice communication spectrum in the HF bands, particularly in the 80 m band (footnote omitted). As a result, some commenters request that the 80 m allocation be extended downward to include 3600-4000 kHz (footnote omitted), 3650-4000 kHz (footnote omitted) or 3675-4000 kHz for voice communications (footnote omitted) believing that expanding the band more than the Commission proposed is justified because the CW band “is grossly underused and represents a huge waste in spectrum.” (footnote omitted). Further, the record suggests that additional spectrum for voice communications would relieve ‘the overcrowding [amateur operators] are experiencing’ (footnote omitted) and that because the Commission’s proposal was to provide additional spectrum for voice communications by eliminating the Novice Class telegraphy subbands so ‘the 80 m Novice class telegraphy subband should be reallocated for voice use.’ (footnote omitted). We conclude that these requests are reasonable, and that authorizing 3600-4000 kHz for voice communications will result in a more equitable division of spectrum between users of narrowband and wideband modes. Accordingly, we will authorize amateur stations to transmit a phone emission in the frequency segment 3600-4000 kHz by amending Section 97.301(b) the (sic) Commission’s Rules.

*R&O at paragraph 11.*

A review of the omitted footnotes in the above quote from the R&O (i.e. footnotes 53 through 58) reveals that the proponents of some increased 80-meter telephony subband expansion beyond that proposed in the Notice in this proceeding numbered only ten individuals. Furthermore, the proponents of telephony expansion to include specifically the entire 3600-4000 kHz segment numbered only six. The remaining four of the ten individuals cited asked for something else, such as 3650 kHz or 3675 kHz as the dividing line, *either of which would have avoided the unintended and adverse consequence that is the subject of this Petition for Reconsideration.* It is unclear what metric the Commission applied in order to conclude that 3600 kHz was the proper dividing line between wider bandwidth telephony operation and narrowband modes. ARRL’s survey resulted in the reasoned opinions of more than 4,700 individuals, which were reflected in the ARRL Petition and in the Notice in this proceeding. While the ARRL survey results did in general support expansion of the telephony subband at 80-meters, the Commission’s decision in the

R&O with respect to 80-meters was at substantial variance with the proposal in the Notice, and it is difficult to justify by the record in this proceeding, taking into account that any telephony subband expansion constitutes a tradeoff.

7. Furthermore, the logic of those six proponents of the expansion of the 80-meter telephony subband to 3600 kHz is flawed. This is not an apportionment of a small, overcrowded band between only telephony and Morse telegraphy emissions, as paragraph 11 of the R&O, and the few cited comments, state. It affects considerably more than just those two operating modes. Narrowband RTTY and data modes are increasingly used at 80 meters as well, and substantial numbers of RTTY and data users stand to be displaced, as well as precluded entirely, by the extent of the telephony subband expansion there. A fundamental premise of the refarming plan as proposed in this proceeding by the Commission, and specifically the portion of the plan dealing with telephony subband expansion, was that licensees should *not* lose operating privileges as the result. But operating privileges have been lost by the extent of the expansion at 80 meters. Moving the dividing line between the 80-meter telegraphy/RTTY/data subband and the 75-meter telegraphy/telephony/image subband from 3750 kHz to 3600 kHz expanded the latter by 150 kHz. The Notice had proposed 3725 kHz as the dividing line, which would have been a 25 kHz expansion from the pre-R&O dividing line of 3750 kHz. Thus, the percentage of the band available for phone/image and that available for RTTY/data from 50/50 to 55/45, as proposed in the NPRM, was changed to 80/20 by the R&O. The R&O actually reduced by 100 kHz the spectrum between 3500 and 4000 kHz that is now available to General Class licensees. Now, General Class licensees can utilize 3525-3750 kHz and 3850-4000 kHz. Under the R&O, those subbands become 3525-3600 and 3800-4000 kHz. The Notice had proposed an increase of 25 kHz (3525-3725 and 3800-4000 kHz), which would have

resulted in a reduction of 25 kHz available for RTTY/data, in exchange for an increase of 50 kHz of phone/image). Advanced Class operators will, as the result of the R&O, suffer a reduction of 75 kHz in the 80-meter band. Now, Advanced Class licensees can utilize 3525-3750 kHz and 3775-4000 kHz. The R&O changes those segments to 3525-3600 kHz and 3700-4000 kHz. The Notice had proposed no change in the amount of available spectrum for Advanced Class licensees, simply shifting 25 kHz from RTTY/data to phone/image.

8. Aside from the operating privileges lost to holders of particular license classes, the 80-meter telephony subband expansion in the R&O places a significant burden and creates adverse impact on telegraphy traffic nets, which typically utilize spectrum between 3530 and 3725 kHz and are particularly numerous between approximately 3640 and 3695 kHz. While the Extra Class licensees could simply stay where they are and suffer interference from telephony operation, General and Advanced licensees have no such option. Therefore, most if not all of the telegraphy nets operating above 3600 kHz will have to cease operating or change frequency below 3600 kHz on or before December 15, 2006.

9. By far, however, the most substantial adverse effect of the unexpected and vast expansion of the 80-meter telephony subband is the complete elimination of access to 3620-3635 kHz by automatically controlled digital stations. This is because the amendment of Section 97.301(b) redefines the “80-meter band” for purposes of that rule section as 3500-3600 kHz. Section 97.305(c), which was unchanged by the R&O, limits RTTY and data emissions to the 80-meter band only. Therefore, because of the change in Section 97.301(b), RTTY and data are no longer authorized modes above 3600 kHz. Section 97.221(b) allows automatically controlled digital stations in, *inter alia*, the subband 3620-

3635 kHz, and nowhere else in the 80-meter band. That rule section was not modified, or proposed to be modified by the R&O. That fact, and the fact that both the Notice and the R&O indicated the Commission's intention not to remove any privileges from incumbent licensees, is ample evidence that the Commission did not realize that the very substantial expansion of the 80-meter telephony subband would have the consequence of removing the operating privilege of those who operate or plan to operate, or use, automatically controlled digital stations in the 80-meter segment, pursuant to Section 97.221(b). To be consistent with the Commission's premises in this proceeding, and in order to avoid removing privileges from a substantial number of individuals who have deployed automatically controlled digital stations in that subband, or who utilize such stations, the Commission should revisit the telephony subband expansion to the extent necessary to restore that operating privilege unintentionally withdrawn by the R&O.

### **III. The Commission Should Modify the 80-meter Telephony Subband Slightly, To Include 3635 to 4000 kHz**

10. The simple and equitable fix for the dilemma created by the telephony subband expansion at 80 meters is to re-establish the dividing line between the telephony/image segment and the RTTY/data segment only to the slight extent necessary to restore access to the automatically controlled narrowband digital subband of 3620-3635 kHz. This would reduce the Extra Class voice/image subband by 35 kHz from that specified in the R&O. Even so, however, the net expansion of the telephony subband from the present configuration would be 115 kHz, which is very substantial indeed. Furthermore, the change would have no negative impact on Advanced Class telephony operators and would, incidentally, create less of a relocation burden on RTTY/data operators. Most CW nets would still have to move, but it would be easier to accommodate them. The balance between phone/image and RTTY/data would be 73/27.

11. This is neither a minor matter, nor an academic exercise in future band planning. It is an urgent problem which, unless corrected, affects a substantial number of existing Amateur Radio fixed facilities and an even more substantial number of mobile facilities. Very recently, ARRL has begun some future band planning efforts for the HF Amateur allocations. In doing so, some of the comments received in response to ARRL's call for input from licensed Amateurs have made reference to the Commission's action at 80 meters. Some of these comments are illustrative of the urgent need to reconsider the extent of the 80-meter telephony subband expansion. Mr. Robert F. Weingaertner, WB2VUF, of Morris Plains, New Jersey, noted recently that implementation of the R&O will seriously degrade public service and emergency communications. He states, in part, that:

The need for statewide and regional HF communications was clearly demonstrated in the aftermath of Hurricane Katrina, when VHF/UHF repeater systems failed. Because of its propagation characteristics the 3.5 MHz band is used extensively for statewide public service communications. Using the Near Vertical Incidence Skywave (NVIS) propagation mode, the band can also support local communication. Winlink, the automatic message forwarding system, received praise for its role in providing emergency communications during the Hurricane Katrina disaster. Yet, the R&O closes off the only portion of spectrum in the 80-meter band that is available for automatically-controlled digital stations such as Winlink. Winlink, and any similar automatic systems, present and future, are now banned from 80-meters. The trend in amateur radio is the development and expansion of digital communication systems for public service communications, as experience shows that digital systems are more efficient than voice communication for moving large volumes of emergency radio traffic, especially under adverse radio propagation conditions. The R&O creates a disproportionate voice allocation at the expense of digital modes, thus dealing a serious blow to the implementation of the advance digital systems which hold so much promise.

The public service and digital networks, as well as casual amateur radio operations operating above 3.6 MHz enjoyed relative freedom from interference, since DX and contest activity seldom extends above 3.6 MHz. Now, all CW and digital networks must be squeezed into the 3.525 to 3.6 MHz spectrum, where they must compete with contests, DXing and casual conversations. We have already experienced the negative effects of this relocation...

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The R&O fails to respect the diversity of amateur radio activities. The R&O allocates 80% of the 3.5 MHz band to voice communications. Digital modes, including cw, RTTY, PACTOR, PSK, MT63, etc. are allocated only 20% of the band. Digital operators prefer these modes for conversation, public service nets, and experimentation with new modes and systems. Is the use of these digital modes somehow less legitimate than voice communications, such that they are not deserving of comparable, if not equal, spectrum space? The greatly reduced allocation for digital modes in the 3.5 MHz band will cause severe overcrowding and will limit experimentation with new modes and stifle the development of the statewide and regional digital communication systems that will be an essential part of a 21<sup>st</sup> century disaster response.

Mr. Gary Kohtala, K7EK, of the State of Washington, in an e-mail to ARRL in November, 2006 stated, in part, as follows:

Subject: Feedback from a displaced user

Additionally, I am a very avid digital mode operator, both the keyboard modes as well as Pactor I, II, and III. I operate a 24/7 Pactor MBO in support of ARES/RACES and the Washington State Department of Emergency Management, the American Red Cross, and my county EOC. Now that the bandwidth rules are being changed, plus my 80m frequencies taken away, I am forced to shut down my MBO. I regularly connect to the WA DEM on 3624 kHz, in addition to exchanging much NTS and other traffic via PACTOR I, II, and III between 3600 and 3650 kHz. The action has put a major burden on my state and county EMCOMM folks to come up with alternatives now that we must shut down our PACTOR and CW operations. Their options are looking very bleak.

Mr. David Schmidt, WB7RDI, of Vancouver, Washington, stated in e-mail correspondence in November, 2006 as follows:

Subject: FCC Omnibus R&O

The elimination of the automatic control subband is a significant concern due to regional emergency communication needs; the networks that are needed in a disaster situation need to be in place prior to the need. Often for "statewide" communications, 80M is the best choice, so this elimination hurts our basis and purpose severely.

Finally, Jerry Reimer, KK5CA, an ARES Section Emergency Coordinator, ARRL Assistant Section Manager and a Member of the ARRL's National Emergency Response Planning Committee, in an e-mail message in November of 2006, stated in part as follows:

Efficient state, section and regional ARES message communications will be severely impaired by the R&O as the revised rules appear in the Federal Register. Eliminating the automatic station control sub-band of 3.620-3.635 MHz immediately stops the operation of all NTS-Digital automatic message forwarding activities on 80M, although such continue to be authorized on these frequencies by 97.221(b). Continued use of the 80M band is critical for section, state and regional NTS-Digital operation, and losing it greatly impairs the ability of ARES and NTS to accomplish their missions. There is no effective substitute, including 60M, on which digital messaging is not permitted. In addition to the loss of section and state NTS-Digital stations, at least five public and eight Emcomm-dedicated U.S. Winlink 2000 PMBOs will either cease operation or must change frequency because they are operating in the 3.620-3.635 MHz sub-band, as authorized. The Winlink 2000 system was cited as a best practice by several post-Hurricane Katrina reviews, including the Congressional "Failure of Initiative" report.

12. ARRL's proposal for the post-refarming configuration of the 80-meter wideband and narrowband segments was different from that finally adopted by the Commission in the R&O. However, ARRL now does not ask for a re-evaluation of that entire subject. Rather, we ask only that the Commission restore the privileges unintentionally withdrawn from those who operate and who utilize automatically controlled, narrowband digital stations between 3620 and 3635 kHz. This restoration of privileges can simply and equitably be accomplished by moving the lower edge of the 80-meter telephony/image subband upward in frequency slightly, from 3600 kHz to 3635 kHz. It is requested that this either be done on an expedited basis pursuant to this Petition, prior to the effective date of the new rules adopted in the R&O,<sup>6</sup> or otherwise by a grant of the Petition for Partial Stay, contemporaneously filed herewith, asking for a very limited stay of the portion of the new rules so as to permit the use of RTTY and data, and not telephony and image emissions, between 3600 and 3635 kHz, pending final action on this instant Petition.

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<sup>6</sup> Because of the publication date of the R&O in the Federal Register, the effective date of the new rules is December 15, 2006.

Therefore, the foregoing considered, ARRL, the National Association for Amateur Radio, respectfully requests that the Commission reconsider and modify the rules governing emissions permitted in the 3600-3635 kHz subband, in accordance with the relief requested herein.

Respectfully submitted,

**ARRL, the National Association For Amateur Radio**

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